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ABSTRACT

This document contains four publications for agricultural occupations in Illinois. "Task Lists for Agricultural Occupations" provide lists of employability skills for the following: park aide; hand sprayer; gardener/groundskeeper; salesperson, parts, agricultural equipment; and dairy processing equipment operator. Each list contains skills required for listed duties. The second section includes task analyses for the cluster of horticulture in the following duty areas: storing, shipping, and taking inventory; and performing general office work. The third section provides task analyses for the cluster of agricultural business and management in the duty area of applying fertilizers and chemicals. In these two sections, each task within an occupational duty area contains the following: performance standard, steps, knowledge, attitudes, safety, equipment and materials, source of analysis, and Illinois state goals for learning. The fourth section contains matrices identifying duties and tasks performed in selected occupations in the following clusters: agricultural business and management, horticulture, agricultural power and machinery, and agricultural resources. (NLA)

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Education For Employment Task Lists

Illinois State Board of Education

Adult Vocational and Technical Education

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1988

TASK LISTS

FOR

AGRICULTURAL OCCUPATIONS

1988

CLUSTER MATRICES

FOR

AGRICULTURAL OCCUPATIONS

CE 060 055

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Illinois Competency Based Vocational
Education Project
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Task Lists Developed by CBVE
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Education For Employment Task Lists

Illinois State Board of Education

Adult Vocational and Technical Education

AGRICULTURAL OCCUPATIONS

Park Aide

*Employability Skills

*Employability skills are a vital component of vocational education programs and should be incorporated into each occupational task list

NOTE:

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EMPLOYABILITY SKILLS

DUTY A: Identifying Employment Opportunities

SKILLS:
1 Identify requirements for job
2 Investigate educational opportunities
3 Investigate occupational opportunities
4 Locate resources for finding employment
5 Confer with prospective employers
6 Identify job trends

DUTY B: Applying Employment Seeking Skills

SKILLS:
1 Locate job openings
2 Document skills and abilities (resume)
3 Prepare for interview
4 Participate in interview
5 Complete required tests
6 Complete required forms
7 Write application letter
8 Write follow-up letter
9 Write acceptance letter
10 Evaluate job offer
11 Evaluate job rejection

DUTY C: Interpreting Employment Capabilities

SKILLS:
1 Match interest to job area
2 Match aptitudes to job area
3 Verify abilities
4 Identify immediate work goal
5 Develop career plan

DUTY D: Demonstrating Appropriate Work Behavior

SKILLS:
1 Exhibit dependability
2 Demonstrate punctuality
3 Follow rules and regulations
4 Recognize the consequences of dishonesty
5 Complete assignments in accurate and timely manner
6 Control emotions
7 Assume responsibility for own decisions and actions
8 Exhibit pride and loyalty
9 Exhibit ability to handle pressures and tensions
10 Demonstrate ability to set priorities
11 Demonstrate problem-solving skills

DUTY E: Maintaining Safe and Healthy Environment

SKILLS:
1 Comply with safety and health rules
2 Select correct tools and equipment
3 Utilize equipment correctly

4 Use appropriate action during emergencies
5 Maintain clean and orderly work area
6 Demonstrate personal hygiene and cleanliness

DUTY F: Maintaining Business-Like Image

SKILLS: 1 Participate in company or agency orientation
2 Demonstrate knowledge of company or agency products and services
3 Exhibit positive behavior
4 Read current job-related publications
5 Support and promote employer's company image and purpose
6 Maintain appearance to comply with company standards

DUTY G: Maintaining Working Relationships with Others

SKILLS: 1 Work productively with others
2 Show empathy, respect and support for others
3 Demonstrate procedures and assist others when necessary
4 Recognize, analyze and solve or refer problems
5 Minimize occurrence of problems
6 Channel emotional reaction constructively

DUTY H: Communicating on the Job

SKILLS: 1 Read and comprehend written communications and information
2 Use correct grammar
3 Speak effectively with others
4 Use job-related terminology
5 Listen attentively
6 Write legibly
7 Use telephone etiquette
8 Follow written and oral directions
9 Ask questions
10 Locate information in order to accomplish task
11 Prepare written communication
12 Utilize keyboarding skills
13 Utilize computer skills

DUTY I: Adapting to Change

SKILLS: 1 Recognize need to change
2 Demonstrate willingness to learn
3 Demonstrate flexibility
4 Participate in continuing education
5 Seek work challenges
6 Adjust career goals/plan as needed

DUTY J: Understanding How a Business Works

SKILLS:
1 Recognize the role of business in the enterprise system
2 Identify general responsibilities of employees
3 Identify general responsibilities of management/employers
4 Investigate opportunities and options for business ownership
5 Identify planning processes needed to open a business
6 Participate in meetings

DUTY K: Performing Mathematical Skills

SKILLS:
1 Apply mathematics for problem solving
2 Add and subtract whole numbers, decimals and fractions
3 Multiply and divide whole numbers, decimals and fractions
4 Convert numbers between forms expressed as fractions, decimals and percents
5 Convert between standard American units of measure
6 Convert between standard American units and metric units

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PARK AIDE

DUTY A: Managing the Recreational Facility

TASKS:
1 Complete weekly receipts
2 Complete invoices
3 Requisition materials, supplies and services
4 Maintain inventory records
5 Maintain equipment maintenance records
6 Follow work schedule
7 Contribute to annual park management update
8 Identify specific recreational program needs for visitors
9 Complete business forms
10 Communicate orally with visitors
11 Assist in assessing and collecting fees and charges
12 Determine land-use capability
13 Assist in development of resource conservation plans
14 Interpret maps, charts and aerial photographs

DUTY B: Applying Laws, Regulations and Policies

TASKS:
1 Interpret visitor disciplinary processes
2 Interpret game and wildlife laws
3 Interpret stream, lake, pond and groundwater laws
4 Patrol park areas
5 Request visitors to voluntarily comply with rules and regulations
6 Process visitor complaints
7 Report violations to appropriate authority
8 Interpret Environmental Protection Agency (EPA) regulations
9 Maintain permits, certificates and licenses
10 Maintain crowd control
11 Direct vehicular and pedestrian traffic
12 Greet and meet people
13 Prepare service work order
14 Estimate cost of service work
15 Post facility directions and warnings
16 Post facility rules and regulations
17 Monitor camping and swimming areas
18 Maintain wildfire protection lanes
19 Maintain facility sanitation

DUTY C: Performing Promotional Activities

TASKS:
1 Conduct a visitors' program and tour
2 Register visitors
3 Give information and directions in a variety of formal and informal settings
4 Implement environmental education programs
5 Identify recreational needs and interests of special individuals and groups
6 Lead or guide recreational activities
7 Stimulate interest and participation in recreational activities for special groups

DUTY D: Managing Facility Flora and Fauna

TASKS:
1 Identify plant communities and dominant species within a selected area
2 Identify native plant species within a selected area
3 Apply pesticides
4 Identify wildlife species within a selected area
5 Identify endangered or exotic species of plant and animal life in a selected area
6 Monitor an ecological burn

DUTY E: Performing General Office Work

TASKS:
1 File materials, such as receipts, letters, documents, specifications and orders
2 Type reports
3 Process incoming telephone calls
4 Process outgoing telephone calls
5 Clean work areas
6 Make minor office equipment repairs

DUTY F: Using Tools, Materials and Equipment

TASKS:
1 Transport supplies using motorized wheeled or tracked equipment
2 Maintain grounds using power tools
3 Maintain grounds using power equipment
4 Use hand tools
5 Patrol lake using motorized and nonmotorized watercraft
6 Perform preventative maintenance on tools
7 Perform preventative maintenance on equipment
8 Pick up supplies using business vehicles
9 Maintain a tool and equipment inventory

DUTY G: Assembling, Servicing and Maintaining Equipment and Facilities

TASKS:
1 Follow a facility and grounds maintenance schedule
2 Report facility and grounds maintenance needs
3 Inspect water and sewer systems
4 Inspect structures and conveniences needing maintenance
5 Maintain grounds and recreation areas
6 Construct recreational equipment
7 Make electrical repairs
8 Troubleshoot equipment failure
9 Prepare concrete forms
10 Finish concrete
11 Maintain facility roads
12 Maintain facility culverts
13 Maintain facility drainage ditches
14 Perform preventative and scheduled maintenance activities on grounds and facilities

DUTY H: Applying Safety Practices

TASKS:
1 Apply basic emergency first aid
2 Use fire extinguisher
3 Administer cardiopulmonary resuscitation (CPR)
4 Comply with safety requirements for working around automated equipment
5 Participate in safety training programs
6 Assist with search and rescue operations
7 Implement plans to protect visitors from dangerous animals and other hazards
8 Implement plans to protect animals and plants and other resources from visitors
9 Store flammable and other hazardous materials safely
10 Monitor equipment for safe operation
11 Maintain shields, guards and other safety devices on tools and equipment
12 Comply with Occupational Safety Health Administration (OSHA) safety standards
13 Complete accident or injury reports

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Education For Employment Task Lists

Illinois State Board of Education

Adult Vocational and Technical Education

AGRICULTURAL OCCUPATIONS

Hand Sprayer

*Employability Skills

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3 Investigate occupational opportunities
4 Locate resources for finding employment
5 Confer with prospective employers
6 Identify job trends

DUTY B: Applying Employment Seeking Skills

SKILLS:
1 Locate job openings
2 Document skills and abilities (resume)
3 Prepare for interview
4 Participate in interview
5 Complete required tests
6 Complete required forms
7 Write application letter
8 Write follow-up letter
9 Write acceptance letter
10 Evaluate job offer
11 Evaluate job rejection

DUTY C: Interpreting Employment Capabilities

SKILLS:
1 Match interest to job area
2 Match aptitudes to job area
3 Verify abilities
4 Identify immediate work goal
5 Develop career plan

DUTY D: Demonstrating Appropriate Work Behavior

SKILLS:
1 Exhibit dependability
2 Demonstrate punctuality
3 Follow rules and regulations
4 Recognize the consequences of dishonesty
5 Complete assignments in accurate and timely manner
6 Control emotions
7 Assume responsibility for own decisions and actions
8 Exhibit pride and loyalty
9 Exhibit ability to handle pressures and tensions
10 Demonstrate ability to set priorities
11 Demonstrate problem-solving skills

DUTY E: Maintaining Safe and Healthy Environment

SKILLS:
1 Comply with safety and health rules
2 Select correct tools and equipment
3 Utilize equipment correctly

4 Use appropriate action during emergencies
5 Maintain clean and orderly work area
6 Demonstrate personal hygiene and cleanliness

DUTY F: Maintaining Business-Like Image

SKILLS: 1 Participate in company or agency orientation
2 Demonstrate knowledge of company or agency products and services
3 Exhibit positive behavior
4 Read current job-related publications
5 Support and promote employer's company image and purpose
6 Maintain appearance to comply with company standards

DUTY G: Maintaining Working Relationships with Others

SKILLS: 1 Work productively with others
2 Show empathy, respect and support for others
3 Demonstrate procedures and assist others when necessary
4 Recognize, analyze and solve or refer problems
5 Minimize occurrence of problems
6 Channel emotional reaction constructively

DUTY H: Communicating on the Job

SKILLS: 1 Read and comprehend written communications and information
2 Use correct grammar
3 Speak effectively with others
4 Use job-related terminology
5 Listen attentively
6 Write legibly
7 Use telephone etiquette
8 Follow written and oral directions
9 Ask questions
10 Locate information in order to accomplish task
11 Prepare written communication
12 Utilize keyboarding skills
13 Utilize computer skills

DUTY I: Adapting to Change

SKILLS: 1 Recognize need to change
2 Demonstrate willingness to learn
3 Demonstrate flexibility
4 Participate in continuing education
5 Seek work challenges
6 Adjust career goals/plan as needed

DUTY J: Understanding How a Business Works

SKILLS:
1 Recognize the role of business in the enterprise system
2 Identify general responsibilities of employees
3 Identify general responsibilities of management/employers
4 Investigate opportunities and options for business ownership
5 Identify planning processes needed to open a business
6 Participate in meetings

DUTY K: Performing Mathematical Skills

SKILLS:
1 Apply mathematics for problem solving
2 Add and subtract whole numbers, decimals and fractions
3 Multiply and divide whole numbers, decimals and fractions
4 Convert numbers between forms expressed as fractions, decimals and percents
5 Convert between standard American units of measure
6 Convert between standard American units and metric units

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HAND SPRAYER

DUTY A: Controlling the Plant Environment

TASKS:
1 Control pests
2 Report disease and spray damage

DUTY B: Applying Fertilizer and Chemicals

TASKS:
1 Calculate fertilizer and chemical applications
2 Formulate fertilizer
3 Calibrate fertilizer application equipment
4 Collect soil sample for fertility test
5 Make fertilizer and lime recommendations
6 Assess crop nutrient deficiencies
7 Treat nutrient deficiencies
8 Identify chemical injury of plants
9 Calibrate chemical equipment
10 Mix chemicals
11 Time chemical applications
12 Store chemicals
13 Perform safety checks on equipment
14 Transport chemicals
15 Map chemical applications
16 Compute fertilizer costs
17 Apply fertilizer using watering system
18 Apply fertilizer using auger-type distributor
19 Apply fertilizer using cyclone-type spreader
20 Apply fertilizer using liquid applicator
21 Apply chemicals using boom-type sprayer
22 Select chemicals for specific problems
23 Compute chemical costs
24 Maintain chemical inventory file
25 Dispose of chemicals and containers according to manufacturer's specifications
26 Suggest lawn chemicals for pest control
27 Interpret chemical labels
28 Suggest chemicals for application to gardens
29 Compute chemicals needed for lawn/garden

DUTY C: Storing, Shipping and Taking Inventory

TASKS:
1 Check received merchandise against invoice listings
2 Keep current inventory of products for sale
3 Load trucks and trailers for drop shipment
4 Transport products
5 Store received supplies
6 Load and unload bagged and bulk materials

DUTY D: Servicing and Maintaining Equipment and Facilities

TASKS:
1 Service conveyance systems
2 Service tires
3 Service utility tractor

4 Service business vehicle
5 Service small four-cycle and two-cycle engines
6 Maintain hand tools
7 Clean dusters
8 Clean sprayers
9 Clean work and delivery areas
10 Lubricate and adjust power equipment
11 Troubleshoot electrical wiring and equipment
12 Troubleshoot equipment failure
13 Calibrate equipment
14 Maintain service records
15 Perform routine maintenance and repairs
16 Prepare equipment for off-season storage
17 Clean and fumigate storage facility
18 Suggest cultural practices to control lawn and garden pests
19 Assemble applicating pumps
20 Assemble boom-type chemical equipment
21 Change nozzles on applicators
22 Clean clogged screens
23 Paint applicating equipment
24 Replace hose clamps
25 Replace liquid hoses

DUTY E: Performing General Office Work

TASKS:
1 Process incoming telephone calls
2 Process outgoing telephone calls
3 Clean work area
4 File materials
5 Type reports
6 Schedule appointments and meetings
7 Write field reports
8 Order supplies and equipment

DUTY F: Performing Sales Duties

TASKS:
1 Plan territory management
2 Complete business forms
3 Determine customer needs
4 Identify potential buyers
5 Provide customers with technical assistance
6 Recommend plant maintenance procedures
7 Implement approved sales option
8 Prepare invoices
9 Inform customer of guarantee specifications
10 Compute sales tax
11 Complete sales slip
12 Identify plant diseases
13 Identify common lawn and garden insects
14 Identify garden crops
15 Suggest procedures for fungus control
16 Suggest procedures for insect control

17 Suggest procedures for weed control
18 Suggest procedures for disease control

DUTY G: Performing Sales-Related Duties

TASKS:
1 Process cash sales transaction
2 Process debit card sales transaction
3 Process customer complaint
4 Greet and meet people
5 Maintain customer file system
6 Interpret market information
7 Read lawn and pest management calendar

DUTY H: Applying Safety Practices

TASKS:
1 Apply basic emergency first aid techniques
2 Use fire extinguisher
3 Administer cardiopulmonary resuscitation (CPR)
4 Comply with safety requirements for working around automated equipment
5 Participate in safety training programs
6 Check working condition of respirator
7 Comply with laws regarding notices of chemical application
8 Obtain and renew chemical application license
9 Determine safe weather conditions for chemical application
10 Clean up chemical spills
11 Recognize pesticide poisoning symptoms
12 Inspect protective clothing before using

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Education For Employment Task Lists

Illinois State Board of Education

Adult Vocational and Technical Education

AGRICULTURAL OCCUPATIONS

Gardener/Groundskeeper

*Employability Skills

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EMPLOYABILITY SKILLS

DUTY A: Identifying Employment Opportunities

SKILLS:
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3 Investigate occupational opportunities
4 Locate resources for finding employment
5 Confer with prospective employers
6 Identify job trends

DUTY B: Applying Employment Seeking Skills

SKILLS:
1 Locate job openings
2 Document skills and abilities (resume)
3 Prepare for interview
4 Participate in interview
5 Complete required tests
6 Complete required forms
7 Write application letter
8 Write follow-up letter
9 Write acceptance letter
10 Evaluate job offer
11 Evaluate job rejection

DUTY C: Interpreting Employment Capabilities

SKILLS:
1 Match interest to job area
2 Match aptitudes to job area
3 Verify abilities
4 Identify immediate work goal
5 Develop career plan

DUTY D: Demonstrating Appropriate Work Behavior

SKILLS:
1 Exhibit dependability
2 Demonstrate punctuality
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4 Recognize the consequences of dishonesty
5 Complete assignments in accurate and timely manner
6 Control emotions
7 Assume responsibility for own decisions and actions
8 Exhibit pride and loyalty
9 Exhibit ability to handle pressures and tensions
10 Demonstrate ability to set priorities
11 Demonstrate problem-solving skills

DUTY E: Maintaining Safe and Healthy Environment

SKILLS:
1 Comply with safety and health rules
2 Select correct tools and equipment
3 Utilize equipment correctly

4 Use appropriate action during emergencies
5 Maintain clean and orderly work area
6 Demonstrate personal hygiene and cleanliness

DUTY F: Maintaining Business-Like Image

SKILLS: 1 Participate in company or agency orientation
2 Demonstrate knowledge of company or agency products and services
3 Exhibit positive behavior
4 Read current job-related publications
5 Support and promote employer's company image and purpose
6 Maintain appearance to comply with company standards

DUTY G: Maintaining Working Relationships with Others

SKILLS: 1 Work productively with others
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3 Demonstrate procedures and assist others when necessary
4 Recognize, analyze and solve or refer problems
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DUTY H: Communicating on the Job

SKILLS: 1 Read and comprehend written communications and information
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6 Write legibly
7 Use telephone etiquette
8 Follow written and oral directions
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10 Locate information in order to accomplish task
11 Prepare written communication
12 Utilize keyboarding skills
13 Utilize computer skills

DUTY I: Adapting to Change

SKILLS: 1 Recognize need to change
2 Demonstrate willingness to learn
3 Demonstrate flexibility
4 Participate in continuing education
5 Seek work challenges
6 Adjust career goals/plan as needed

DUTY J: Understanding How a Business Works

SKILLS:
1 Recognize the role of business in the enterprise system
2 Identify general responsibilities of employees
3 Identify general responsibilities of management/employers
4 Investigate opportunities and options for business ownership
5 Identify planning processes needed to open a business
6 Participate in meetings

DUTY K: Performing Mathematical Skills

SKILLS:
1 Apply mathematics for problem solving
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DUTY A: Propagating Plants, Seeds and Cuttings

TASKS:
1 Plan planting schedules
2 Plant bulbs
3 Transplant seedlings using hand transplanter
4 Transplant seedlings using wheel-type planter
5 Monitor plant growth
6 Lay sod
7 Maintain sod
8 Plant trees and shrubs
9 Provide winterization of plants
10 Select seed varieties

DUTY B: Preparing Soils and Planting Media

TASKS:
1 Construct open drainage ditches
2 Prepare seedbed
3 Level or smooth planting area
4 Mark off location of beds
5 Shape or form beds
6 Mark off planting spaces with bedwire

DUTY C: Controlling the Plant Environment

TASKS:
1 Cultivate plants
2 Water plants and nursery stock
3 Prune plants, hedges and shrubs
4 Apply mulches
5 Control pests
6 Treat diseased plants, bulbs and corms
7 Remove diseased plants
8 Plan conservation practices
9 Aerate compacted soils
10 Pinch and disbud flowering plants
11 Report disease and spray damage
12 Control soil erosion
13 Wrap trees
14 Brace bareroot trees
15 Stake trees
16 Treat tree wounds
17 Treat tree cavities

DUTY D: Applying Fertilizer and Chemicals

TASKS:
1 Calculate fertilizer and chemical applications
2 Formulate fertilizer
3 Calibrate fertilizer application equipment
4 Collect soil sample for fertility test
5 Make fertilizer and lime recommendations
6 Assess crop nutrient deficiencies
7 Treat nutrient deficiencies
8 Identify chemical injury of plants
9 Calibrate chemical equipment

10 Mix chemicals
11 Time chemical applications
12 Store chemicals
13 Perform safety checks on equipment
14 Transport chemicals
15 Compute fertilizer costs
16 Apply fertilizer using watering system
17 Apply fertilizer using auger-type distributor
18 Apply fertilizer using cyclone-type spreader
19 Apply fertilizer using drill-type distributor
20 Select chemicals for specific problems
21 Compute chemical costs
22 Maintain chemical inventory file
23 Dispose of chemicals and containers according to manufacturer's specifications
24 Suggest lawn chemicals for pest control
25 Interpret chemical labels
26 Suggest chemicals for application to gardens
27 Compute chemicals needed for lawn/garden

DUTY E: Harvesting Plants

TASKS:
1 Dig shrubs and trees
2 Harvest seeds
3 Harvest bareroot stock
4 Dig bulbs and corms
5 Cut flowers and ferns

DUTY F: Maintaining and Protecting Fruit Trees

TASKS:
1 Prune trees for frame
2 Perform annual pruning for shape and fruit set
3 Top fruit trees using mechanical topper

DUTY G: Designing/Installing Landscapes

TASKS:
1 Obtain plants
2 Follow landscape plan in installing plants
3 Plant trees
4 Plant shrubs
5 Plant ground covers
6 Seed lawns
7 Select plants
8 Read landscape plan
9 Set landscaping stones

DUTY H: Maintaining and Improving Grounds

TASKS:
1 Aerify turf
2 Verticut turf
3 Apply topdressing to turf
4 Overseed turf

5 Mow grounds
6 Trim hedges
7 Trim lawn edges
8 Irrigate lawns
9 Prune trees
10 Prune plants, hedges and shrubs
11 Sod worn spots in lawn
12 Clean ornamental pools
13 Clean grounds of litter and leaves
14 Dispose of prunings
15 Maintain pools and fountains
16 Apply salt to icey sidewalks and drives

DUTY I: Servicing and Maintaining Equipment and Facilities

TASKS:
1 Service tillage preparation equipment
2 Service planting equipment
3 Service cultivating equipment (clean, lubricate and adjust chain drive)
4 Service conveyance systems
5 Service tires
6 Service utility tractor
7 Service business vehicle
8 Service small four-cycle and two-cycle engines
9 Maintain hand tools
10 Service sprinkler system by replacing valves and gaskets
11 Clean dusters
12 Clean sprayers
13 Install sprinkler heads, nozzles and other irrigation equipment
14 Clean work and delivery areas
15 Lubricate and adjust power equipment
16 Troubleshoot electrical wiring and equipment
17 Troubleshoot equipment failure
18 Calibrate equipment
19 Maintain service records
20 Order equipment parts
21 Service electrical controls
22 Perform routine maintenance and repairs
23 Service electric motors
24 Prepare equipment for off-season storage
25 Establish service records
26 Suggest cultural practices to control lawn and garden pests

DUTY J: Performing Sales Duties

TASKS:
1 Identify plants
2 Identify plant diseases
3 Identify common lawn and garden insects
4 Identify garden crops
5 Suggest procedures for fungus control
6 Suggest procedures for insect control

7 Suggest procedures for weed control
8 Suggest procedures for disease control

DUTY K: Maintaining and Constructing Structures

TASKS:
1 Service electrical systems of buildings
2 Paint exterior surfaces of buildings
3 Paint interior surfaces
4 Repair and glaze windows and greenhouse lights
5 Construct coldframes
6 Perform maintenance inspection of facilities

DUTY L: Managing the Business

TASKS:
1 Supervise agriculture workers
2 Orient new employees
3 Plan work schedules
4 Determine labor needs
5 Train workers using demonstration-performance method
6 Evaluate employee performance
7 Prepare reports

DUTY M: Applying Safety Practices

TASKS:
1 Apply basic emergency first aid techniques
2 Use fire extinguisher
3 Administer cardiopulmonary resuscitation (CPR)
4 Comply with safety requirements for working around automated equipment
5 Participate in safety training programs
6 Determine safe weather conditions for chemical application
7 Clean up chemical spills
8 Recognize pesticide poisoning symptoms

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Education For Employment Task Lists

Illinois State Board of Education

Adult Vocational and Technical Education

AGRICULTURAL OCCUPATIONS

Salesperson, Parts, Agricultural Equipment
*Employability Skills

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EMPLOYABILITY SKILLS

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SKILLS:
1 Identify requirements for job
2 Investigate educational opportunities
3 Investigate occupational opportunities
4 Locate resources for finding employment
5 Confer with prospective employers
6 Identify job trends

DUTY B: Applying Employment Seeking Skills

SKILLS:
1 Locate job openings
2 Document skills and abilities (resume)
3 Prepare for interview
4 Participate in interview
5 Complete required tests
6 Complete required forms
7 Write application letter
8 Write follow-up letter
9 Write acceptance letter
10 Evaluate job offer
11 Evaluate job rejection

DUTY C: Interpreting Employment Capabilities

SKILLS:
1 Match interest to job area
2 Match aptitudes to job area
3 Verify abilities
4 Identify immediate work goal
5 Develop career plan

DUTY D: Demonstrating Appropriate Work Behavior

SKILLS:
1 Exhibit dependability
2 Demonstrate punctuality
3 Follow rules and regulations
4 Recognize the consequences of dishonesty
5 Complete assignments in accurate and timely manner
6 Control emotions
7 Assume responsibility for own decisions and actions
8 Exhibit pride and loyalty
9 Exhibit ability to handle pressures and tensions
10 Demonstrate ability to set priorities
11 Demonstrate problem-solving skills

DUTY E: Maintaining Safe and Healthy Environment

SKILLS:
1 Comply with safety and health rules
2 Select correct tools and equipment
3 Utilize equipment correctly

4 Use appropriate action during emergencies
5 Maintain clean and orderly work area
6 Demonstrate personal hygiene and cleanliness

DUTY F: Maintaining Business-Like Image

SKILLS: 1 Participate in company or agency orientation
2 Demonstrate knowledge of company or agency products and services
3 Exhibit positive behavior
4 Read current job-related publications
5 Support and promote employer's company image and purpose
6 Maintain appearance to comply with company standards

DUTY G: Maintaining Working Relationships with Others

SKILLS: 1 Work productively with others
2 Show empathy, respect and support for others
3 Demonstrate procedures and assist others when necessary
4 Recognize, analyze and solve or refer problems
5 Minimize occurrence of problems
6 Channel emotional reaction constructively

DUTY H: Communicating on the Job

SKILLS: 1 Read and comprehend written communications and information
2 Use correct grammar
3 Speak effectively with others
4 Use job-related terminology
5 Listen attentively
6 Write legibly
7 Use telephone etiquette
8 Follow written and oral directions
9 Ask questions
10 Locate information in order to accomplish task
11 Prepare written communication
12 Utilize keyboarding skills
13 Utilize computer skills

DUTY I: Adapting to Change

SKILLS: 1 Recognize need to change
2 Demonstrate willingness to learn
3 Demonstrate flexibility
4 Participate in continuing education
5 Seek work challenges
6 Adjust career goals/plan as needed

DUTY J: Understanding How a Business Works

SKILLS:
1 Recognize the role of business in the enterprise system
2 Identify general responsibilities of employees
3 Identify general responsibilities of management/employers
4 Investigate opportunities and options for business ownership
5 Identify planning processes needed to open a business
6 Participate in meetings

DUTY K: Performing Mathematical Skills

SKILLS:
1 Apply mathematics for problem solving
2 Add and subtract whole numbers, decimals and fractions
3 Multiply and divide whole numbers, decimals and fractions
4 Convert numbers between forms expressed as fractions, decimals and percents
5 Convert between standard American units of measure
6 Convert between standard American units and metric units

Employability skills are a vital component of vocational education programs and should be incorporated into each occupational task list.

SALESPERSON, PARTS, AGRICULTURAL EQUIPMENT

DUTY A: Performing Sales Duties

TASKS:
1 Determine customer needs
2 Locate merchandise
3 Compute sales tax
4 Complete sales slip
5 Inform customer of warranty and guarantee specifications
6 Close sale
7 Conduct sale
8 Complete business forms
9 Communicate orally with clients

DUTY B: Performing Sales-Related Duties

TASKS:
1 Open store or department
2 Process debit card sales transaction
3 Process charge card sales transaction
4 Package customer purchase
5 Arrange delivery of merchandise
6 Process customer complaints
7 Close out cash register
8 Close store or department
9 Process customer refund on sale
10 Process cash sales transaction
11 Order supplies and stock
12 Process incoming order
13 Return unuseable merchandise
14 Code and date merchandise
15 Label and price merchandise
16 Update prices on merchandise
17 Stock merchandise displays
18 Store merchandise in storage area
19 Rotate supplies and stock
20 Greet and meet people
21 Supply parts to service shop
22 Use microfiche to determine part number
23 Use microfiche to determine part availability
24 Use parts catalog to determine part number
25 Use computer inventory system to determine part availability

DUTY C: Performing Promotional Activities

TASKS:
1 Maintain customer file system
2 Prepare advertisements
3 Identify potential buyers
4 Provide technical assistance to customers
5 Build merchandise displays
6 Calculate customer discount

DUTY D: Financing the Agribusiness

TASKS:
1 Prepare cash flow projections
2 Interpret financial statements
3 Prepare budget
4 Develop credit plan
5 Prepare bank deposits
6 Record accounts payable in computerized bookkeeping system
7 Record accounts receivable in computerized bookkeeping system
8 Balance charge receipts and cash tickets

DUTY E: Performing General Office Work

TASKS:
1 Establish filing system
2 Establish file index
3 File materials, such as receipts, letters, documents, specifications and orders
4 Write field reports (prepare reports)
5 Type reports
6 Process incoming mail
7 Process outgoing mail
8 Maintain mailing lists
9 Schedule appointments and meetings
10 Process incoming telephone calls
11 Process outgoing telephone calls
12 Duplicate materials
13 Clean work area
14 Make minor office equipment repairs

DUTY F: Managing the Business

TASKS:
1 Conduct periodic inspection of merchandise
2 Conduct inventory of merchandise
3 Maintain inventory records
4 Plan work schedule
5 Determine labor needs
6 Maintain quality control records
7 Evaluate agribusiness productivity
8 Supervise agriculture workers
9 Maintain equipment records
10 Follow time management schedule
11 Follow work schedules
12 Examine returned parts for defects
13 Receive new shipment of parts based on packing slip

DUTY G: Assembling, Servicing and Maintaining Equipment and Facilities

TASKS:
1 Service business vehicle
2 Maintain service records
3 Troubleshoot equipment failure

DUTY H: Loading, Securing, Transporting and Unloading Agricultural Products

TASKS:
1 Prepare truck
2 Load farm machinery
3 Unload farm machinery
4 Secure loads and tag for shipping
5 Prepare shipping records

DUTY I: Applying Safety Practices

TASKS:
1 Comply with shop and equipment safety rules
2 Apply basic emergency first aid techniques
3 Complete accident report
4 Inspect work area and equipment for safe working environment
5 Use fire extinguisher
6 Correct safety hazards
7 Demonstrate cardiopulmonary resuscitation (CPR) techniques
8 Comply with safety requirements for working around automated systems
9 Participate in safety training program

Employability skills are a vital component of vocational education programs and should be incorporated into each occupational task list.

Education For Employment Task Lists

Illinois State Board of Education

Adult Vocational and Technical Education

AGRICULTURAL OCCUPATIONS

Dairy Processing Equipment Operator

*Employability Skills

*Employability skills are a vital component of vocational education programs and should be incorporated into each occupational task list

NOTE:

The duties and tasks found in these task lists form the basis of instructional content for secondary, postsecondary and adult occupational training programs. Orientation level instruction, usually offered in grades 9, 10, and 11, is a vital component of all vocational education programs and provides a strong foundation and vehicle for transitioning into occupational training programs.

These materials were prepared under contract with the Illinois State Board of Education, Department of Adult, Vocational and Technical Education ("Illinois Competency Based Vocational Education Project," contract number PS-10-130).

EMPLOYABILITY SKILLS

DUTY A: Identifying Employment Opportunities

SKILLS:
1 Identify requirements for job
2 Investigate educational opportunities
3 Investigate occupational opportunities
4 Locate resources for finding employment
5 Confer with prospective employers
6 Identify job trends

DUTY B: Applying Employment Seeking Skills

SKILLS:
1 Locate job openings
2 Document skills and abilities (resume)
3 Prepare for interview
4 Participate in interview
5 Complete required tests
6 Complete required forms
7 Write application letter
8 Write follow-up letter
9 Write acceptance letter
10 Evaluate job offer
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1 Match interest to job area
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SKILLS:
1 Exhibit dependability
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SKILLS:
1 Comply with safety and health rules
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SKILLS: 1 Participate in company or agency orientation
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DUTY A: Starting Up High-Temperature, Short-Time Pasteurization

TASKS:
1 Inspect equipment prior to start-up
2 Adjust equipment for start-up
3 Prepare data recording equipment
4 Start up high-temperature, short-time pasteurization process

DUTY B: Processing High-Temperature, Short-Time Pasteurization

TASKS:
1 Monitor pasteurization process
2 Adjust equipment for high-temperature, short-time processing
3 Record high-temperature, short-time processing data
4 Put product into storage tank

DUTY C: Performing Product-to-Product Changeover

TASKS:
1 Prepare lines and valves to bring new product to balance tank
2 Adjust equipment for product changeover
3 Complete product changeover process

DUTY D: Performing Product Changeover Requiring Flush-Out

TASKS:
1 Operate lines following established sequence
2 Set recording data equipment for changeover/flush-out
3 Perform flush-out procedures
4 Inspect equipment for proper operation
5 Complete product changeover process

DUTY E: Shutting Down High-Temperature, Short-Time Pasteurization

TASKS:
1 Prepare high-temperature, short-time for shut-down
2 Shut down high-temperature, short-time system
3 Inspect recording data equipment

DUTY F: Cleaning the High-Temperature, Short-Time Pasteurizer

TASKS:
1 Inspect and adjust equipment and lines for cleaning
2 Perform cleaning procedures
3 Inspect equipment

DUTY G: Applying Safety Practices

TASKS:
1 Comply with shop and equipment safety rules
2 Apply basic emergency first aid techniques
3 Complete accident report
4 Inspect work area and equipment for safe working environment
5 Use fire extinguisher
6 Correct safety hazards

7 Demonstrate cardiopulmonary resuscitation (CPR) techniques
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Education
For
Employment
Task Lists

Illinois
State Board of
Education

Adult
Vocational and
Technical Education

1988

TASK ANALYSIS

FOR

AGRICULTURAL OCCUPATIONS

CLUSTER: **HORTICULTURE**

Duty Areas: Storing, Shipping and Taking Inventory

Performing General Office Work

BEST COPY AVAILABLE

Illinois Competency Based Vocational
Education Project
Housed At: Lake County Area
Vocational Center
19525 West Washington Street
Grayslake, IL 60030-1194
(312) 223-6681 or 620-8770

Tasks Analyzed by CBVE
Agricultural Occupations Consultant — Jerry Pepple, Ed.D.

CBVE Project Director — Urban T. Oen, Ph.D.

TASK ANALYSIS

FOR

AGRICULTURAL OCCUPATIONS

CLUSTER: **HORTICULTURE**

Duty Area: Storing, Shipping and Taking Inventory

TASK ANALYSIS

OCCUPATION	Horticultural Worker
DUTY AREA	Storing, Shipping and Taking Inventory
TASK	Bundle plants
PERFORMANCE STANDARD	Bundle a predetermined number or weight of plant material so it is secured and labeled with species name and date.
STEPS	1. Select graded plant material to be bundled. 2. Determine number or weight of plant material to be included per bundle for particular plant species according to the American Standards of Nursery Stock. 3. Place plant material of the same grade in the same bundle. 4. Secure the bundle. 5. Label and date bundles.
KNOWLEDGE	Add and subtract whole numbers, decimals and fractions. Demonstrate problem-solving skills. Use equipment correctly. Read and comprehend written communication and information.
ATTITUDES	Exhibits pride and loyalty. Demonstrates punctuality. Follows rules and regulations. In addition, refer to the Employability Skills List.
SAFETY	Observe proper safety procedures when using hand tools. Clean up work area when assignment is completed.
EQUIPMENT AND MATERIALS	Plant material Supplies for bundles Labels
SOURCE OF ANALYSIS	V-TECS Catalog, Ornamental Horticulture Production Occupations, Performance Objective 149.

ILLINOIS STATE GOALS FOR LEARNING

Language Arts:

Goal 1-C: Reading for various purposes and identification of text to accomplish each purpose.

Goal 3-C: Use of specific information or reasons to support and elaborate the main point.

Biological and Physical Sciences:

Goal 4-B: Classification.

TASK ANALYSIS

OCCUPATION	Horticultural Worker
DUTY AREA	Storing, Shipping and Taking Inventory
TASK	Wrap plants
PERFORMANCE STANDARD	Wrap a tree or shrub soil ball with burlap so all roots are covered and the soil is tightly secured.
STEPS	1. Select tree/shrub to be dug. 2. Determine how large soil ball is needed to support the tree/shrub. 3. Tie lower branches up with twine to reduce injury. 4. Dig tree/shrub. 5. Undercut soil ball from the earth. 6. Slide a sheet of burlap in the trench and under the soil ball. 7. Lift tree/shrub from hole. 8. Wrap burlap tightly around the soil ball. 9. Pin burlap with nails as soil ball is being wrapped. 10. Secure burlap around the soil ball with twine.
KNOWLEDGE	Demonstrate willingness to learn. Demonstrate problem-solving skills. Follow written and oral instructions. Use job-related terminology. Speak effectively with others.
ATTITUDES	Minimizes occurrence of problems. Exhibits pride and loyalty. Follows rules and regulations. In addition, refer to the Employability Skills List.
SAFETY	Follow proper procedures when using hand and power tools. Use caution when lifting and moving heavy objects.
EQUIPMENT AND MATERIALS	Tree or shrub for wrapping Wrapping materials/supplies

SOURCE OF ANALYSIS	V-TECS Catalog, Ornamental Horticulture Production Occupations, Performance Objective 148.
ILLINOIS STATE GOALS FOR LEARNING	Language Arts: Goal 1-C: Reading for various purposes and identification of text to accomplish each purpose. Goal 3-C: Use of specific information of reasons to support and elaborate the main point. Biological and Physical Sciences: Goal 4-B: Classification.

TASK ANALYSIS

OCCUPATION	Horticultural Worker
DUTY AREA	Storing, Shipping and Taking Inventory
TASK	Pack plants
PERFORMANCE STANDARD	Package plants so flower/foliage numbers in each bunch is of the specified number.
STEPS	1. Identify flowers/foliage materials to be packaged. 2. Verify the number of flowers/foliage per bunch and the total number per box. 3. Select uniform flower/foliage of good quantity and roll each bunch in waxed paper or place them in a plastic sleeve. 4. Place the bunches in a packing box. 5. Fill in excess space with newspaper or other suitable packing materials to prevent flowers/foliage from shifting about in packages. 6. Close the container and seal.
KNOWLEDGE	Demonstrate willingness to learn. Use equipment correctly. Follow written and oral instructions. Listen attentively. Prepare written communication.
ATTITUDES	Exhibits dependability. Recognizes the consequences of dishonesty. Minimizes occurrence of problems. Follows rules and regulations. In addition, refer to the Employability Skills List.
SAFETY	Use proper procedures when using hand and power tools. Clean up work area when assignment is completed.
EQUIPMENT AND MATERIALS	Plants for packing Packing supplies

SOURCE OF ANALYSIS	V-TECS Catalog, Horticulture: Floriculture, Performance Objective 86.
ILLINOIS STATE GOALS FOR LEARNING	Language Arts: Goal 1-C: Reading for various purposes and identification of text to accomplish each purpose. Mathematics: Goal 1-E: Application of properties of numbers and operations. Biological and Physical Sciences: Goal 1-L: Stages, mechanisms, and rate of change.

TASK ANALYSIS

OCCUPATION	Horticultural Worker
DUTY AREA	Storing, Shipping and Taking Inventory
TASK	Bunch plants
PERFORMANCE STANDARD	Count and bunch flowers so stems are pointing in the same direction and are of a uniform length when placed in the bunch.
STEPS	1. Review the purchase order or shipment invoice before counting and bunching. 2. Locate the flowers to be counted and bunched. 3. Bind the bunches together by double or triple wrapping with a rubber band.
KNOWLEDGE	Add and subtract whole numbers, decimals and fractions. Demonstrate willingness to learn. Use equipment correctly. Follow written and oral instructions. Apply mathematics for problem-solving. Prepare written communication.
ATTITUDES	Enjoys detail work. Enjoys working with numbers. Prepare written communication. Follows rules and regulations. In addition, refer to the Employability Skills List.
SAFETY	Observe proper procedures when using hand and power tools. Clean up work area when assignment is completed.
EQUIPMENT AND MATERIALS	Plants for bunching Purchase order Supplies for binding plants
SOURCE OF ANALYSIS	V-TECS Catalog, Horticulture: Floriculture, Performance Objective 165.

ILLINOIS STATE GOALS FOR LEARNING

Language Arts:

Goal 1-A: Recognition, recall, and summarization of material read.

Mathematics:

Goal 1-E: Application of properties of numbers and operations.

TASK ANALYSIS

OCCUPATION	Horticultural Worker
DUTY AREA	Storing, Shipping and Taking Inventory
TASK	Pack shrubs
PERFORMANCE STANDARD	Package shrub so the proper amounts of root and soil remain intact and moist during the digging process.
STEPS	1. Select shrub to be dug. 2. Determine how large a soil ball is needed to support the shrub. 3. Tie lower branches to reduce damage. 4. Dig shrub. 5. Place shrub into container. 6. Add soil as needed and water.
KNOWLEDGE	Use equipment correctly. Locate information to accomplish the task. Use job-related terminology.
ATTITUDES	Follows rules and regulations. Exhibits dependability. In addition, refer to the Employability Skills List.
SAFETY	Follow proper operating procedures for hand and power equipment.
EQUIPMENT AND MATERIALS	Shrub Container Cord
SOURCE OF ANALYSIS	V-TECS Catalog, Ornamental Horticulture Production Occupations, Performance Objectives 147 and 148.

TASK ANALYSIS

OCCUPATION	Horticultural Worker
DUTY AREA	Storing, Shipping and Taking Inventory
TASK	Care for overwintering of container-grown plants
PERFORMANCE STANDARD	Care for conditioned plant material during the overwintering period by storing at recommended environmental conditions.
STEPS	1. Identify species of plant material to be stored. 2. Estimate length of storage period. 3. Determine optimum environmental conditions required for plant species. 4. Place plant material in storage unit by specie, size and date placed in unit. 5. Label plant material. 6. Inspect plant material periodically for deterioration and environmental conditions. 7. Record observations and dates of visits.
KNOWLEDGE	Demonstrate problem-solving skills. Use equipment correctly. Follow written and oral instructions. Apply mathematics for problem solving. Prepare written communication. Write legibly.
ATTITUDES	Exhibits dependability. Enjoys working with numbers. Follows rules and regulations. Assumes responsibility for own actions and decisions. In addition, refer to the Employability Skills List.
SAFETY	Observe proper safety procedures when using electrical equipment. Follow safety guidelines when using hand and power tools.
EQUIPMENT AND MATERIALS	Plants for storage Plant storage facility

SOURCE OF ANALYSIS	V-TECS Catalog, Ornamental Horticulture Production Occupations, Performance Objectives 146 and 154.
ILLINOIS STATE GOALS FOR LEARNING	Language Arts: Goal 1-C: Reading for various purposes and identification of text to accomplish each purpose. Goal 3-C: Use of specific information of reasons to support and elaborate the main point. Biological and Physical Sciences: Goal 1-E: Common characteristics of plant and animal communities. Goal 1-L: Stages, mechanisms, and rate of change. Goal 3-B: Basic scientific standards and research abilities. Goal 4-A: Observation.

TASK ANALYSIS

OCCUPATION	Horticultural Worker
DUTY AREA	Storing, Shipping and Taking Inventory
TASK	Check received merchandise against invoice listing
PERFORMANCE STANDARD	Compare the merchandise received against the invoice listings and note discrepancies and damaged items.
STEPS	1. Move the merchandise out of the way of customer and employee traffic. 2. Compare the quantity listed on the packing slip with the quantity received. 3. Check for damaged items. 4. Check to be sure all items ordered were received. 5. File the packing slip with the purchase order. 6. Prepare shipment for storage or display. 7. Call discrepancies to the attention of the manager.
KNOWLEDGE	Add and subtract whole numbers, decimals and fractions. Exhibits dependability. Enjoys detail work. Follow written and oral instructions. Apply mathematics for problem solving.
ATTITUDES	Self motivating. Enjoys working with people. Enjoys working with numbers. Follows rules and regulations. Recognizes the consequences of dishonesty. In addition, refer to the Employability Skills List.
SAFETY	Use proper procedures when moving and lifting heavy objects.
EQUIPMENT AND MATERIALS	Merchandise Invoice Packing slips
SOURCE OF ANALYSIS	V-TECS Catalog, Garden Center Salesperson/Garden Center Worker/Landscape Designer, Performance Objective 9.

ILLINOIS STATE GOALS FOR LEARNING

Language Arts:

Goal 1-A: Recognition, recall, and summarization of material read.

Goal 1-C: Reading for various purposes and identification of text to accomplish each purpose.

Social Sciences:

Goal 5-I: Roles of the individual in the world of work.

TASK ANALYSIS

OCCUPATION	Horticultural Worker
DUTY AREA	Storing, Shipping and Taking Inventory
TASK	Keep current inventory of products for sale
PERFORMANCE STANDARD	Record inventory of products making note of description, size, stock code, cost, reorder number and number of stock on hand.
STEPS	1. Obtain current ledger inventory and stock inventory forms. 2. Identify stock and supply items by name, size, description and stock code. 3. Count stock and supply items. 4. Compare physical count to ledger count. 5. Determine cause of any discrepancies. 6. Update ledger account. 7. Reorder stock and supply items if number required for reorder number is reached.
KNOWLEDGE	Add and subtract whole numbers, decimals and fractions. Demonstrate problem-solving skills. Follow written and oral instructions. Apply mathematics for problem solving. Prepare written communication. Write legibly.
ATTITUDES	Enjoys detail work. Enjoys working with numbers. Follows rules and regulations. Exhibits the ability to handle pressure and tension. In addition, refer to the Employability Skills List.
SAFETY	Clean up work area when assignment is completed.
EQUIPMENT AND MATERIALS	Ledger inventory Stock and supply items
SOURCE OF ANALYSIS	V-TECS Catalog, Ornamental Horticulture Production Occupations, Performance Objective 1.

ILLINOIS STATE GOALS FOR LEARNING

Language Arts:

Goal 1-A: Recognition, recall, and summarization of material read.

Goal 1-C: Reading for various purposes and identification of text to accomplish each purpose.

Mathematics:

Goal 1-E: Application of properties of numbers and operations.

TASK ANALYSIS

OCCUPATION	Horticultural Worker
DUTY AREA	Storing, Shipping and Taking Inventory
TASK	Load truck and trailer for drop shipment
PERFORMANCE STANDARD	Load delivery vehicle so first delivery is at the back and the last delivery is at the front of the vehicle.
STEPS	1. Sort orders in the order of their delivery. 2. Phone customers to verify delivery time. 3. Mark the items with the customer's name. 4. Write the directions to where they will be delivered. 5. Note the orders and their delivery sequence. 6. Protect plants to prevent damages. 7. Load the items on the truck with the last delivery on the truck first, first delivery of the truck last. 8. Give the delivery sequence to the driver.
KNOWLEDGE	Add and subtract whole numbers, decimals and fractions. Demonstrate problem-solving skills. Use equipment correctly. Follow written and oral instructions. Apply mathematics for problem solving. Listen attentively.
ATTITUDES	Exhibits dependability. Enjoys detail work. Minimizes occurrence of problems. Enjoys working with people. Enjoys working with numbers. Follows rules and regulations. In addition, refer to the Employability Skills List.
SAFETY	Clean up work area when assignment is completed. Use proper procedures when moving and lifting heavy objects.
EQUIPMENT AND MATERIALS	Delivery vehicle Orders for delivery Supplies for delivery

SOURCE OF ANALYSIS	V-TECS Catalog, Garden Center Salesperson/Garden Center Worker/Landscape Designer, Performance Objective 40.
ILLINOIS STATE GOALS FOR LEARNING	Language Arts: Goal 3-C: Use of specific information of reasons to support and elaborate the main point. Goal 2-F: Effective and appropriate responses.

TASK ANALYSIS

OCCUPATION	Horticultural Worker
DUTY AREA	Storing, Shipping and Taking Inventory
TASK	Transport products
PERFORMANCE STANDARD	Deliver products to specified destination without damage and obtain customer's signature on the delivery form.
STEPS	1. Obtain delivery schedule. 2. Secure crates, cartons and plants to prevent damage during transport. 3. Study delivery schedule to insure customer's name and address and directions to delivery point are included on schedule. 4. Drive truck to first delivery point. 5. Unload the customer's designated products from truck. 6. Note condition of items. 7. Obtain customer signature. 8. Check remaining items to be sure they are secure for transport.
KNOWLEDGE	Add and subtract whole numbers, decimals and fractions. Demonstrate problem-solving skills. Use equipment correctly. Follow written and oral instructions. Identify different types of merchandise/products offered by the business. Listen attentively. Speak effectively with others. Write legibly.
ATTITUDES	Exhibits dependability. Show empathy, respect and support for others. Minimizes occurrence of problems. Enjoys working with people. Follows rules and regulations. In addition, refer to the Employability Skills List.
SAFETY	Observe proper safety procedures in the use of power equipment. Use proper procedures when moving and lifting heavy objects.

EQUIPMENT AND MATERIALS	Delivery vehicle Merchandise Delivery schedule
SOURCE OF ANALYSIS	V-TECS Catalog, Ornamental Horticulture Production Occupations, Performance Objective 159.
ILLINOIS STATE GOALS FOR LEARNING	Language Arts: Goal 1-C: Reading for various purposes and identification of text to accomplish each purpose. Goal 3-C: Use of specific information of reasons to support and elaborate the main point.

TASK ANALYSIS

OCCUPATION	Horticultural Worker
DUTY AREA	Storing, Shipping and Taking Inventory
TASK	Package orders for shipment
PERFORMANCE STANDARD	Assemble packing materials and plants for shipping and package the materials to insure that the products arrive with minimum loss of quality and condition.
STEPS	1. Review the packaging and shipping procedures for the particular order being filled. 2. Package the plants following requirements for safe shipment: a. Check condition of plants. b. Pack flowers firmly. c. Provide insulation for temperature control. 3. Include the necessary invoices and shipping labels. 4. Clean up the work area after completion of task.
KNOWLEDGE	Demonstrate willingness to learn. Use equipment correctly. Follow written and oral instructions. Locate information to accomplish the task.
ATTITUDES	Exhibits dependability. Enjoys detail work. Enjoys working with numbers. Enjoys working with people. In addition, refer to the Employability Skills List.
SAFETY	Observe proper procedures when lifting or moving heavy objects. Properly secure merchandise when transporting.
EQUIPMENT AND MATERIALS	Packing materials Invoices Shipping labels
SOURCE OF ANALYSIS	V-TECS Catalog, Floriculture Workers, Performance Objective 83.

ILLINOIS STATE GOALS FOR LEARNING

Language Arts:

Goal 1-A: Recognition, recall, and summarization of material read.

TASK ANALYSIS

OCCUPATION	Horticultural Worker
DUTY AREA	Storing, Shipping and Taking Inventory
TASK	Store received supplies
PERFORMANCE STANDARD	Organize and store stock and supplies at specified temperature, humidity and light conditions according to manufacturer's recommendations.
STEPS	1. Determine proper environmental conditions for received supplies and stock. 2. Inspect and organize areas to be used for storage. 3. Place stock and supplies in the designated areas. 4. Label and date all chemicals and perishable items. 5. Update and maintain stock room inventory sheet.
KNOWLEDGE	Add and subtract whole numbers, decimals and fractions. Use equipment correctly. Follow written and oral instructions. Apply mathematics for problem solving. Write legibly.
ATTITUDES	Exhibits dependability. Enjoys detail work. Enjoys working with numbers. Enjoys working with people. Follows rules and regulations. In addition, refer to the Employability Skills List.
SAFETY	Observe proper procedures when handling and lifting heavy objects. Properly secure chemicals in designated areas.
EQUIPMENT AND MATERIALS	Supplies for storing Inventory sheets
SOURCE OF ANALYSIS	V-TECS Catalog, Ornamental Horticulture Production Occupations, Performance Objective 5.

ILLINOIS STATE GOALS FOR LEARNING	Language Arts: Goal 3-C: Use of specific information of reasons to support and elaborate the main point. Biological and Physical Sciences: Goal 1-G: Equilibrium applied to simple systems.

TASK ANALYSIS

OCCUPATION	Landscape Laborer
DUTY AREA	Storing, Shipping and Taking Inventory
TASK	Write sales receipt
PERFORMANCE STANDARD	Complete a sales slip for a customer purchase.
STEPS	1. Obtain a pad of sales slips. 2. Fill in information concerning customer's name and address and telephone number. 3. Sign or initial the ticket. 4. Indicate if the sale is charge or cash. 5. Fill in information concerning the purchase, date, quantity, merchandise numbers and prices. 6. Determine the total prices of the products listed on the sales receipt. 7. Total the sales receipt. 8. Have customer sign receipt if the transaction is a charged sale.
KNOWLEDGE	Add and subtract whole numbers, decimals and fractions. Use equipment correctly. Use correct grammar. Listen attentively. Apply mathematics for problem-solving.
ATTITUDES	Exhibits dependability. Controls emotions. Enjoys working with numbers. Enjoys working with people. Exhibits the ability to handle pressure and tension. In addition, refer to the Employability Skills List.
SAFETY	Clean up work area when assignment is completed.
EQUIPMENT AND MATERIALS	Merchandise for sale Sales slip

SOURCE OF ANALYSIS	V-TECS Catalog, Agricultural Equipment Parts Salesperson, Performance Objective 53.
ILLINOIS STATE GOALS FOR LEARNING	Language Arts: Goal 1-A: Recognition, recall, and summarization of material read. Goal 3-A: Use of appropriate language and style in writing for a variety of purposes and audiences. Goal 3-F: Ability to revise, edit, and proofread. Mathematics: Goal 1-B: Ability to perform operations with numbers and without a calculator. Goal 1-D: Ordering numbers.

TASK ANALYSIS

OCCUPATION	Horticultural Worker
DUTY AREA	Storing, Shipping and Taking Inventory
TASK	Assemble shipping cartons
PERFORMANCE STANDARD	Assemble shipping cartons so they are symmetrical and sufficiently strong to sustain and protect plants being shipped.
STEPS	1. Arrange all necessary equipment and materials in the work place. 2. Assemble each carton by folding, stapling and taping. 3. Check each carton to insure proper assembly. 4. Stack cartons in proper storage area. 5. Return all unused materials to storage when task is completed.
KNOWLEDGE	Use equipment correctly. Follow written and oral instructions.
ATTITUDES	Exhibits dependability. Enjoys detail work. Self motivating. Follows rules and regulations. In addition, refer to the Employability Skills List.
SAFETY	Use proper procedures when lifting and moving heavy objects. Clean up work area when assignment is completed.
EQUIPMENT AND MATERIALS	Unassembled shipping cartons Supplies for assembling cartons
SOURCE OF ANALYSIS	V-TECS Catalog, Horticulture: Floriculture, Performance Objective 200.

TASK ANALYSIS

OCCUPATION	Horticultural Worker
DUTY AREA	Storing, Shipping and Taking Inventory
TASK	Load and unload bagged and bulk materials
PERFORMANCE STANDARD	Transfer bagged and/or bulk materials using established techniques and safety precautions.
STEPS	1. Identify material to be transferred taking note of any safety precautions. 2. Transfer bagged materials on pallets using a forklift: a. Perform service check on forklift tractor. b. Start motor and check all adjustments. c. Adjust hydraulic system to meet the needs and condition of the job. d. Return forklift unit to storage area. 3. Transfer bulk material using an auger. 4. Clean up any spills promptly and properly.
KNOWLEDGE	Demonstrate willingness to learn. Demonstrate problem-solving skills. Use equipment correctly. Follow written and oral instructions. Listen attentively. Recognize, analyze and solve or refer problems.
ATTITUDES	Exhibits dependability. Follows rules and regulations. Exhibits the ability to handle pressure and tension. In addition, refer to the Employability Skills List.
SAFETY	Observe proper procedures when handling chemicals. Use proper procedures when lifting or moving heavy objects.
EQUIPMENT AND MATERIALS	Materials for transporting Transporting equipment

SOURCE OF ANALYSIS	V-TECS Catalog, Turfgrass Maintenance Worker, Performance Objective 138. V-TECS Catalog, Chemical Sales/Chemical Applicator, Performance Objective 8.
ILLINOIS STATE GOALS FOR LEARNING	Language Arts: Goal 1-C: Reading for various purposes and identification of text to accomplish each purpose. Biological and Physical Sciences: Goal 1-O: The nature of force.

TASK ANALYSIS

OCCUPATION	Horticultural Worker
DUTY AREA	Storing, Shipping and Taking Inventory
TASK	Store floral and foliage plants in cold storage units
PERFORMANCE STANDARD	Prepare and place plants in cold storage units so their quality is maintained.
STEPS	1. Identify plants which are to be placed in cold storage. 2. Prepare cut flowers and foliage for cold storage. 3. Place plants in storage. 4. Check and adjust environmental control equipment according to needs of plant material.
KNOWLEDGE	Demonstrate willingness to learn. Use equipment correctly. Follow written and oral instructions. Locate information to accomplish the task. Listen attentively.
ATTITUDES	Exhibits dependability. Exhibits pride and loyalty. Follows rules and regulations. In addition, refer to the Employability Skills List.
SAFETY	Clean up work area when assignment is completed.
EQUIPMENT AND MATERIALS	Plants for storage
SOURCE OF ANALYSIS	V-TECS Catalog, Horticulture: Floriculture, Performance Objective 191.
ILLINOIS STATE GOALS FOR LEARNING	Language Arts: Goal 1-A: Recognition, recall, and summarization of material read. Goal 1-C: Reading for various purposes and identification of text to accomplish each purpose.

ILLINOIS STATE GOALS FOR LEARNING (CONT.)

Biological and Physical Sciences:

Goal 1-G: Equilibrium applied to simple systems.

Goal 1-N: Relationship of structure to function.

TASK ANALYSIS

FOR

AGRICULTURAL OCCUPATIONS

CLUSTER: **HORTICULTURE**

Duty Area: Performing General Office Work

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TASK ANALYSIS

OCCUPATION	Landscape Gardener/Landscaper
DUTY AREA	Performing General Office Work
TASK	Process incoming telephone calls
PERFORMANCE STANDARD	Answer telephone on first or second ring and identify organization and self. Caller must be assisted as requested. Messages must be taken without error.
STEPS	1. Answer telephone on first or second ring, if possible, identifying organization and self. 2. Determine caller's name and organization. 3. Establish purpose of call. 4. Give helpful information to caller. 5. Ask questions as needed. 6. Transfer call, if necessary. 7. Take and verify message. 8. Complete the call.
KNOWLEDGE	Determine when more information is needed and ask questions to gain information. Use accepted standards of grammar. Follow procedures established by company to answer telephone and take messages.
ATTITUDES	Use selected nonverbal communication techniques to covey a proper message. Use positive speaking strategies. In addition, refer to the Employability Skills List.
SAFETY	Do not expose the equipment to water or moisture. Secure power cord and headphone cord so they cannot be damaged. Operate equipment according to manufacturer's instructions.
EQUIPMENT AND MATERIALS	Telephone Company telephone directory or listing Company procedures manual

SOURCE OF ANALYSIS

V-TECS Catalog, Agricultural Equipment Parts Salesperson, Performance Objective 50.
Agribusiness Procedures and Records, Lee, J., 1980.
Office Procedures and Technology, Moon, H. R., 1984.

ILLINOIS STATE GOALS FOR LEARNING

Language Arts:

- Goal 1-A: Recognition, recall, and summarization of material read.
- Goal 2-A: Meaning of spoken messages.
- Goal 2-B: Sequence of ideas from spoken messages.
- Goal 2-C: Inferences from spoken messages and nonverbal cues.
- Goal 2-F: Effective and appropriate responses.
- Goal 4-A: Clear and expressive speaking.

Social Sciences:

- Goal 3-F: Development of oral and written communication.

TASK ANALYSIS

OCCUPATION	Landscape Gardener/Landscaper
DUTY AREA	Performing General Office Work
TASK	Process outgoing telephone calls
PERFORMANCE STANDARD	Telephone call must accomplish its purpose.

STEPS

1. Review purpose of call.
2. Organize thoughts and materials prior to placing a call.
3. Determine current time for location being called if call is to be made to different time zone.
4. Locate name and number of person being called.
5. Place call:
   a. Dial number.
   b. Identify yourself and ask for person with whom you wish to speak.
   c. State purpose of call.
   d. Conclude conversation and restate any relevant points to make sure message is accurate.
6. Document or log call, if necessary.

KNOWLEDGE

Determine when more information is needed and ask questions to gain information.
Use accepted standards of grammar.
Use special features found on telephone, such as hold and call transfer.

ATTITUDES

Use selected nonverbal communication techniques to convey a proper message.
Use positive speaking strategies.
In addition, refer to the Employability Skills List.

SAFETY

Do not expose the equipment to water or moisture.
Secure power cord and headphone cord so they cannot be damaged.
Operate equipment according to manufacturer's instructions.

EQUIPMENT AND MATERIALS

Telephone

SOURCE OF ANALYSIS	Agribusiness Procedures and Records, Lee, J., 1980. Office Procedures and Technology, Moon, H. R., 1984.

ILLINOIS STATE GOALS FOR LEARNING

Language Arts:

- Goal 1-A: Recognition, recall, and summarization of material read.
- Goal 2-E: Differing perspectives and points of view.
- Goal 2-F: Effective and appropriate responses.
- Goal 3-C: Use of specific information of reasons to support and elaborate the main point.
- Goal 4-A: Clear and expressive speaking.
- Goal 6-D: English grammar.

Social Sciences:

- Goal 3-F: Development of oral and written communication.

TASK ANALYSIS

OCCUPATION: Landscape Gardener/Landscaper

DUTY AREA: Performing General Office Work

TASK: Clean work area

PERFORMANCE STANDARD: Clean and maintain your assigned work area according to business guidelines.

STEPS:

1. Select appropriate cleaning utensils and supplies.
2. Return all loose, unsold merchandise/products found on the floor, tables or counters to the stockroom or storage bins.
3. Pick up loose paper from the floor and deposit in trash containers.
4. Return empty soft drink containers to storage area.
5. Remove oil, grease or dust from all counters, shelves, tables, displays or chairs found in the work area or department.
6. Straighten up and clean all product and parts catalogs and inventory files.
7. Sweep the floor and mop up any accumulation of oil, grease or dirt.
8. Clean and disinfect all bathrooms used by department customers and personnel.
9. Break down empty, unnecessary boxes and place in trash containers.
10. Dispose of all trash and debris deposited in the trash containers.
11. Return cleaning utensils to their proper storage areas.

KNOWLEDGE:
Use equipment correctly.
Locate information to accomplish the task.
Interpret information on labels of cleaning agents.

ATTITUDES:
Exhibit self-motivation.
Exhibit pride and loyalty.
In addition, refer to the Employability Skills List.

SAFETY:
Observe recommended procedures when handling chemical cleaning agents.
Report any broken or damaged equipment to supervisor.

EQUIPMENT AND MATERIALS	Chemical cleaners Cleaning equipment
SOURCE OF ANALYSIS	V-TECS Catalog, Agricultural Equipment Parts Salesperson, Performance Objective 52.
ILLINOIS STATE GOALS FOR LEARNING	Language Arts: Goal 1-A: Recognition, recall, and summarization of material read. Goal 1-C: Reading for various purposes and identification of text to accomplish each purpose. Goal 6-C: Nature and use of language in nonprint media. Physical Development and Health: Goal 3-A: Safe and appropriate use of equipment in physical activities.

TASK ANALYSIS

OCCUPATION: Landscape Gardener/Landscaper

DUTY AREA: Performing General Office Work

TASK: File materials

PERFORMANCE STANDARD: Given a collection of business material; sort the material and file those items which need to be kept so they are accessible, safe and filed according to the established business filing system.

STEPS:

1. Obtain all materials from the file basket and sort those which have been released for filing.
2. Remove rubber bands, paper clips, etc. from papers. Staple enclosures which need to be attached.
3. Attach small pieces of paper to standard-sized sheets of paper.
4. Fold large-size documents to the size of the file folder.
5. Code the material to be filed according to system (alphabet, subject, numeric, geographic or noncorrespondence).
6. Sort and organize the materials according to the needs of the filing system used.
7. Prepare new file folders, if needed.
8. Place materials in folders with latest date at the front of the folder.
9. Contact supervisor to clarify any questions.

KNOWLEDGE:
Follow written and oral instructions.
Prepare written communication.
Recognize visual cues to meaning.
Select appropriate labeling and filing supplies.
Locate incorrectly filed materials.

ATTITUDES:
Enjoys detail work.
Exhibits pride and loyalty.
In addition, refer to the Employability Skills List.

SAFETY: Keep work area organized and clean.

EQUIPMENT AND MATERIALS	Materials for filing Filing supplies Filing cabinets or other storage equipment
SOURCE OF ANALYSIS	Office Procedures and Technology, Moon, H. R., 1984. Agribusiness Procedures and Records, Lee, J., 1980.
ILLINOIS STATE GOALS FOR LEARNING	Language Arts: Goal 1-A: Recognition, recall, and summarization of material read. Goal 1-C: Reading for various purposes and identification of text to accomplish each purpose. Goal 3-C: Use of specific information of reasons to support and elaborate the main point. Mathematics: Goal 1-D: Ordering numbers. Social Sciences: Goal 5-B: Sources of information evaluated in terms of selective criteria.

TASK ANALYSIS

OCCUPATION	Landscape Gardener/Landscaper
DUTY AREA	Performing General Office Work
TASK	Type reports
PERFORMANCE STANDARD	Given the necessary data, prepare a typed report which is accurate, informative and easy to read and use.
STEPS	1. Outline the report information by subject and topic. 2. Research sources of information. Prepare notes for later reference. 3. Type a rough draft. 4. Proofread and edit rough draft. 5. Type a revised manuscript. 6. Proofread revised copy. 7. Prepare letter of transmittal, if needed.
KNOWLEDGE	Use equipment correctly. Locate information to accomplish the task. Prepare written communication.
ATTITUDES	Enjoys detail work. Enjoys working with numbers. In addition, refer to the Employability Skills List.
SAFETY	Observe proper use of equipment. Maintain a neat and organized work area.
EQUIPMENT AND MATERIALS	Typing equipment
SOURCE OF ANALYSIS	Office Procedures and Technology, Moon, H. R., 1984.

ILLINOIS STATE GOALS FOR LEARNING

Language Arts:

- Goal 1-A: Recognition, recall, and summarization of material read.
- Goal 1-F: Integration of information from more than one text.
- Goal 3-A: Use of appropriate language and style in writing for a variety of purposes and audiences.
- Goal 3-E: Use of standard written English conventions.
- Goal 3-F: Ability to revise, edit, and proofread.
- Goal 6-D: English grammar.

TASK ANALYSIS

OCCUPATION	Landscape Gardener/Landscaper
DUTY AREA	Performing General Office Work
TASK	Process incoming mail
PERFORMANCE STANDARD	Given incoming business mail, process the mail by sorting, opening and distributing it according to company policy.

STEPS

1. Sort the mail for the department. Check for items sent to wrong address and return to post office.
2. Sort individual's mail by separating the important mail and the routine mail.
3. Open important mail:
   a. Staple envelope to enclosure.
   b. Attach other enclosures to letter with paper clip.
   c. Place current date on mail in upper corner.
   d. Place mail in file folder bearing individual's name and place folder on individual's desk.
4. Sort routine mail:
   a. Sort papers, magazines, etc. into one pile.
   b. Open routine mail.
   c. Staple envelope to contents.
   d. Attach enclosures with paper clip.
   e. Date the mail.
   f. Route mail to personnel.

KNOWLEDGE

Demonstrate problem-solving skills.
Follow written and oral instructions.
Read and comprehend written communication and information.

ATTITUDES

Exhibits dependability.
Enjoys detail work.
Demonstrates punctuality.
In addition, refer to the Employability Skills List.

SAFETY

Maintain a neat, organized work area.

EQUIPMENT AND MATERIALS

Department directory
Incoming mail

SOURCE OF ANALYSIS	Agribusiness Procedures and Records, Lee, J., 1980. Office Procedures and Technology, Moon, H. R., 1984.
ILLINOIS STATE GOALS FOR LEARNING	Language Arts: Goal 1-A: Recognition, recall, and summarization of material read.

TASK ANALYSIS

OCCUPATION	Landscape Gardener/Landscaper
DUTY AREA	Performing General Office Work
TASK	Process outgoing mail
PERFORMANCE STANDARD	Prepare all outgoing mail so documents are delivered to the post office for sorting and dispatching in the shortest time possible.
STEPS	1. Select proper size and type of envelope. 2. Address outgoing mail. 3. Fold correspondence. 4. Seal the mail. 5. Select appropriate class of service. 6. Weigh mail and apply postage. 7. Deliver mail to collection boxes.
KNOWLEDGE	Add and subtract whole numbers, decimals and fractions. Use equipment correctly. Follow written and oral instructions. Prepare written communication.
ATTITUDES	Enjoys detail work. Enjoys working with numbers. Follows rules and regulations. In addition, refer to the Employability Skills List.
SAFETY	Maintain a neat, organized work area.
EQUIPMENT AND MATERIALS	Outgoing mail Mailing supplies
SOURCE OF ANALYSIS	Office Systems and Procedures, Luke, C. M. and Stiegler, C. B., 1987. Office Procedures and Technology, Moon, H. R., 1984.

ILLINOIS STATE GOALS FOR LEARNING

Language Arts:

Goal 1-A: Recognition, recall, and summarization of material read.

Goal 3-A: Use of appropriate language and style in writing for a variety of purposes and audiences.

Mathematics:

Goal 1-E: Application of properties of numbers and operations.

Goal 3-E: Application of selected measurement systems, instruments, and techniques.

TASK ANALYSIS

OCCUPATION	Landscape Gardener/Landscaper
DUTY AREA	Performing General Office Work
TASK	Maintain mailing list
PERFORMANCE STANDARD	Maintain a current mailing list of individuals who have a need for the agribusiness' services/products.
STEPS	1. Identify market to be reached by direct mail. 2. Identify potential buyers for the services/products. 3. Update the mailing list by doing one or more of the following: a. Use double postcard for company to return. b. Use post office to correct addresses. c. Delete names of companies who have not used the company's services recently.
KNOWLEDGE	Demonstrate problem-solving skills. Follow written and oral instructions. Recognize, analyze and solve or refer problems.
ATTITUDES	Enjoys detail work. Enjoys working with numbers. Follows rules and regulations. In addition, refer to the Employability Skills List.
SAFETY	Maintain a neat, organized work area.
EQUIPMENT AND MATERIALS	Company mailing list
SOURCE OF ANALYSIS	Office Procedures and Technology, Moon, H. R., 1984. Office Systems and Procedures, Luke, C. M. and Stiegler, C. B., 1987.

ILLINOIS STATE GOALS FOR LEARNING

Language Arts:

- Goal 1-A: Recognition, recall, and summarization of material read.
- Goal 3-A: Use of appropriate language and style in writing for a variety of purposes and audiences.
- Goal 3-C: Use of specific information of reasons to support and elaborate the main point.
- Goal 3-F: Ability to revise, edit, and proofread.

Social Sciences:

- Goal 3-I: Effects of mass communication on human behavior.
- Goal 5-B: Sources of information evaluated in terms of selective criteria.

TASK ANALYSIS

OCCUPATION	Landscape Gardener/Landscaper
DUTY AREA	Performing General Office Work
TASK	Schedule appointments and meetings
PERFORMANCE STANDARD	Schedule appointments and meetings to reduce waiting time and interruptions.
STEPS	1. Check appointment calendar for day and time. 2. Confirm appointment with superiors. 3. Record appointment in appointment book: a. Who is making appointment. b. Length of meeting time needed. c. Purpose of meeting. d. Location of meeting.
KNOWLEDGE	Demonstrate problem-solving skills. Follow written and oral instructions. Listen attentively. Prepare written communication.
ATTITUDES	Exhibits dependability. Enjoys detail work. Minimizes occurrence of problems. Assumes responsibility for own actions and decisions. In addition, refer to the Employability Skills List.
SAFETY	Maintain a neat, organized work area.
EQUIPMENT AND MATERIALS	Appointment book
SOURCE OF ANALYSIS	Office Procedures and Technology, Moon, H. R., 1984. Office Systems and Procedures, Luke, C. M. and Stiegler, C. B., 1987.

ILLINOIS STATE GOALS FOR LEARNING

Language Arts:

- Goal 1-A: Recognition, recall, and summarization of material read.
- Goal 2-B: Sequence of ideas from spoken messages.
- Goal 2-F: Effective and appropriate responses.

Social Sciences:

- Goal 5-I: Roles of the individual in the world of work.
- Goal 5-M: Management of human and material resources.

TASK ANALYSIS

OCCUPATION	Landscape Gardener/Landscaper
DUTY AREA	Performing General Office Work
TASK	Repair minor malfunctions of office equipment
PERFORMANCE STANDARD	Troubleshoot office equipment for malfunctions and perform needed repairs.
STEPS	1. Review the equipment system design and operating procedures. 2. Obtain relevant information from the worker using the equipment when it malfunctioned. 3. Inspect the equipment starting with the most accessible components, noting discrepancies. 4. If possible, observe the equipment under operating conditions. 5. Record possible causes and readings taken during testing of the equipment. 6. Review list of possible reasons for failure and select a cause. 7. Perform the necessary tests or adjustments to correct the equipment malfunction.
KNOWLEDGE	Plan a problem-solving strategy. Compare the principles of equipment operation and design.
ATTITUDES	Enjoys detail work. Enjoys working with numbers. Enjoys working with people. Follows rules and regulations. In addition, refer to the Employability Skills List.
SAFETY	Assess electrical and mechanical hazards. Determine which procedures to follow when working around moving parts with safety shields removed.
EQUIPMENT AND MATERIALS	Equipment systems Tools and equipment

SOURCE OF ANALYSIS	Fundamentals of Service, John Deere, 1984.
ILLINOIS STATE GOALS FOR LEARNING	Language Arts: Goal 1-A: Recognition, recall, and summarization of material read. Goal 1-G: Justification and explanation of answers to questions about material read. Goal 3-C: Use of specific information of reasons to support and elaborate the main point. Physical Development and Health: Goal 3-A: Safe and appropriate use of equipment in physical activities.

TASK ANALYSIS

OCCUPATION	Landscape Gardener/Landscaper
DUTY AREA	Performing General Office Work
TASK	Duplicate materials
PERFORMANCE STANDARD	Reproduce a given document so the copy is of the same quality as the original and the quantity specified.
STEPS	1. Select type of paper recommended by the operator's manual. 2. Check original document to be sure that it is: a. Error-free. b. Free of marks on the edges and smudges. c. Clear and dark where keyboarded. 3. Place original in reprographic equipment. 4. Run test copy. 5. Prepare requested number of copies. 6. Collate or organize copies as requested or required. 7. Return reprographic equipment to original condition as when started.
KNOWLEDGE	Use equipment correctly. Follow written and oral instructions. Prepare written communication.
ATTITUDES	Enjoys detail work. Enjoys working with numbers. In addition, refer to the Employability Skills List.
SAFETY	Maintain a neat, organized work area.
EQUIPMENT AND MATERIALS	Duplicating equipment Duplicating supplies
SOURCE OF ANALYSIS	Office Systems and Procedures, Luke, C. M. and Stiegler, C. B., 1987.

ILLINOIS STATE GOALS FOR LEARNING

Language Arts:

Goal 1-A: Recognition, recall, and summarization of material read.

Goal 3-F: Ability to revise, edit, and proofread.

Mathematics:

Goal 1-B: Ability to perform operations with numbers and without a calculator.

TASK ANALYSIS

OCCUPATION	Landscape Gardener/Landscaper
DUTY AREA	Performing General Office Work
TASK	Establish filing system
PERFORMANCE STANDARD	Establish a filing system which is simple, logical, flexible and designed so documents can be added and deleted easily.
STEPS	1. Alphabetize names by last, first and middle. 2. Prepare individual folders for material relating to one correspondent. 3. Prepare special folders which relate to one subject. 4. Arrange documents and folders in file cabinets in appropriate main guides.
KNOWLEDGE	Demonstrate problem-solving skills. Follow written and oral instructions. Locate information to accomplish the task. Prepare written communication.
ATTITUDES	Enjoys detail work. Minimizes occurrence of problems. Enjoys working with numbers. Follows rules and regulations. In addition, refer to the Employability Skills List.
SAFETY	Maintain a neat, organized work area.
EQUIPMENT AND MATERIALS	Filing equipment Filing supplies
SOURCE OF ANALYSIS	Agribusiness Procedures and Records, Lee, J., 1980.

ILLINOIS STATE GOALS FOR LEARNING

Language Arts:

- Goal 1-A: Recognition, recall, and summarization of material read.
- Goal 1-C: Reading for various purposes and identification of text to accomplish each purpose.
- Goal 3-C: Use of specific information of reasons to support and elaborate the main point.
- Goal 6-A: Diversity of language conventions.

Mathematics:

- Goal 1-D: Ordering numbers.

Social Sciences:

- Goal 5-B: Sources of information evaluated in terms of selective criteria.

TASK ANALYSIS

OCCUPATION: Landscape Gardener/Landscaper

DUTY AREA: Performing General Office Work

TASK: Establish file index

PERFORMANCE STANDARD: Given a list of customer names, establish an alphabetized file index.

STEPS:

1. Prepare file index for individual names by applying the following guidelines:
   a. Separate name into filing units and arrange so surname, given name and middle initial appear.
   b. Treat nicknames as given names when preferred by individuals.
   c. Index abbreviated names as if they were spelled out.
   d. Index prefixed surnames as one unit.
   e. Index hyphenated names as one unit.
   f. Refer to addresses when indexing identical names.
   g. Do not index by titles or degrees.
   h. Seniority titles are treated as the last filing unit.
   i. Index married woman's name using husband's surname.
   j. Do not consider accents in foreign names.
2. Prepare file index for company names by applying the following rules:
   a. Index name as commonly written.
   b. Index individual names in the order of surname, given name, middle initial and rest of company name.
   c. Do not use conjunctions and prepositions as separate filing units unless they are an official part of the company name.
   d. Index abbreviations as one unit.
   e. Index hyphenated names as one unit.
   f. Refer to addresses when indexing identical names.
   g. Consider possessives and contractions as one filing unit.
   h. Index numerical names ahead of alphabetic names.

KNOWLEDGE:
Demonstrate problem-solving skills.
Use equipment correctly.
Follow written and oral instructions.
Locate information to accomplish the task.

ATTITUDES	Exhibits dependability. Enjoys detail work. Enjoys working with numbers. Follows rules and regulations. In addition, refer to the Employability Skills List.
SAFETY	Maintain a neat, organized work area.
EQUIPMENT AND MATERIALS	Filing equipment Filing materials
SOURCE OF ANALYSIS	Office Systems and Procedures, Luke, C. M. and Stiegler, C. B., 1987.
ILLINOIS STATE GOALS FOR LEARNING	Language Arts: Goal 1-A: Recognition, recall, and summarization of material read. Goal 1-C: Reading for various purposes and identification of text to accomplish each purpose. Goal 3-C: Use of specific information of reasons to support and elaborate the main point. Mathematics: Goal 1-D: Ordering numbers. Social Sciences: Goal 5-B: Sources of information evaluated in terms of selective criteria.

TASK ANALYSIS

OCCUPATION: Landscape Gardener/Landscaper

DUTY AREA: Performing General Office Work

TASK: Prepare bank deposits

PERFORMANCE STANDARD: Complete a bank deposit form using receipts at end of business day.

STEPS:

1. Assemble deposit slip, checks, currency and coins at work area.
2. Count coins and write total in appropriate space on deposit slip.
3. Count currency and write total in appropriate space on deposit slip.
4. Check to make sure that all checks are payable to store and are signed.
5. Endorse all valid checks.
6. Calculate total of all checks.
7. List each check by number and amount in appropriate space.
8. Enter total of checks on the face of the deposit slip.
9. Add totals of currency, coins and checks and enter in appropriate space on deposit slip.
10. Add total of bank card charges and enter on deposit slip.
11. Write the following information on the face of the deposit slip in the appropriate spaces:
    a. Name of store/business.
    b. Address.
    c. Account number.
    d. Date.
12. Assemble deposit in bank bag for delivery.

KNOWLEDGE:

Add and subtract whole numbers, decimals and fractions.
Follow written and oral instructions.
Listen attentively.
Prepare written communication.
Write legibly.

ATTITUDES	Enjoys detail work. Recognizes the consequences of dishonesty. Enjoys working with numbers. Follows rules and regulations. In addition, refer to the Employability Skills List.
SAFETY	Maintain a neat, organized work area.
EQUIPMENT AND MATERIALS	Bank deposit form Currency
SOURCE OF ANALYSIS	V-TECS Catalog, Fashion Salesperson, Performance Objective 17. Agribusiness Procedures and Records, Lee, J., 1980.
ILLINOIS STATE GOALS FOR LEARNING	Language Arts: Goal 1-A: Recognition, recall, and summarization of material read. Goal 3-A: Use of appropriate language and style in writing for a variety of purposes and audiences. Mathematics: Goal 1-A: Ability to read, write and name numbers in several different ways. Goal 1-B: Ability to perform operations with numbers and without a calculator. Goal 1-D: Ordering numbers. Goal 1-H: Application of computational and problem-solving skills to common life situations with or without a calculator. Goal 1-I: Use of number patterns.

TASK ANALYSIS

OCCUPATION	Landscape Gardener/Landscaper
DUTY AREA	Performing General Office Work
TASK	Reconcile bank statements
PERFORMANCE STANDARD	Balance a bank statement and the checkbook register so the monthly balance is the same and all charges and deposits are accounted for.
STEPS	1. Organize the checks so they are in numerical order. 2. Mark off each canceled check in the checkbook register. 3. Mark off each deposit in the checkbook register. 4. Deduct bank service from the checkbook balance. 5. Add deposits not shown on bank statement to bank balance. 6. Deduct checks written but not shown on bank statement from bank balance. 7. Add interest earned to checkbook balance, if appropriate. 8. Compare adjusted balances in the checkbook register and bank statement for equal totals.
KNOWLEDGE	Add and subtract whole numbers, decimals and fractions. Follow written and oral instructions. Listen attentively. Prepare written communication. Write legibly.
ATTITUDES	Enjoys detail work. Recognizes the consequences of dishonesty. Apply mathematics for problem-solving. Enjoys working with numbers. In addition, refer to the Employability Skills List.
SAFETY	Maintain a neat, organized work area.
EQUIPMENT AND MATERIALS	Bank statement form Checking account records

SOURCE OF ANALYSIS	Agribusiness Procedures and Records, Lee, J., 1980. Office Systems and Procedures, Luke, C. M. and Stiegler, C. B., 1987.
ILLINOIS STATE GOALS FOR LEARNING	Language Arts: Goal 1-A: Recognition, recall, and summarization of material read. Mathematics: Goal 1-A: Ability to read, write and name numbers in several different ways. Goal 1-B: Ability to perform operations with numbers and without a calculator. Goal 1-D: Ordering numbers. Goal 1-H: Application of computational and problem-solving skills to common life situations with or without a calculator. Goal 1-I: Use of number patterns.

TASK ANALYSIS

OCCUPATION	Landscape Gardener/Landscaper
DUTY AREA	Performing General Office Work
TASK	Write field reports
PERFORMANCE STANDARD	Prepare a field report which details specific job tasks performed and problems encountered and solved.
STEPS	1. Prepare field report form which identifies specific job tasks. 2. Record jobs actually performed at job sites. 3. Identify problems encountered in performing task and note any unique circumstances. 4. Record recommended action taken to solve problem. 5. Store record in a safe and handy location.
KNOWLEDGE	Add and subtract whole numbers, decimals and fractions. Demonstrate problem-solving skills. Use equipment correctly. Follow written and oral instructions.
ATTITUDES	Enjoys detail work. Self motivating. Enjoys working with numbers. Assumes responsibility for own actions and decisions. In addition, refer to the Employability Skills List.
SAFETY	Maintain a neat, organized work area. Observe work site safety regulations.
EQUIPMENT AND MATERIALS	Report forms
SOURCE OF ANALYSIS	Preventive Maintenance, John Deere, Fundamentals of Machine Operation, 1984. Agribusiness Procedures and Records, Lee, J., 1980.

ILLINOIS STATE GOALS FOR LEARNING

Language Arts:

Goal 1-A: Recognition, recall, and summarization of material read.

Goal 3-A: Use of appropriate language and style in writing for a variety of purposes and audiences.

Goal 3-C: Use of specific information of reasons to support and elaborate the main point.

Goal 3-F: Ability to revise, edit, and proofread.

TASK ANALYSIS

OCCUPATION	Landscape Gardener/Landscaper
DUTY AREA	Performing General Office Work
TASK	Order supplies and equipment
PERFORMANCE STANDARD	Given flagged index cards and order forms, order supplies and equipment to update inventory to maximum quantities specified on index cards.
STEPS	1. Secure purchase order forms for ordering supplies and equipment. 2. Write in purchase order number. 3. Write in name of manufacturer. 4. Identify where order is to be sent by manufacturer. 5. Identify shipping arrangements. 6. Identify payment terms. 7. State description, quantity and price per unit of supplies being ordered. 8. Calculate total cost per item and amount of order. 9. Date and obtain signature of authorized personnel. 10. Send original to manufacturer and retain copy of purchase order for department files.
KNOWLEDGE	Add and subtract whole numbers, decimals and fractions. Demonstrate problem-solving skills. Use equipment correctly. Follow written and oral instructions. Apply mathematics for problem-solving. Prepare written communication.
ATTITUDES	Enjoys detail work. Enjoys working with numbers. Follows rules and regulations. In addition, refer to the Employability Skills List.
SAFETY	Maintain a neat, organized work area.
EQUIPMENT AND MATERIALS	Flagged index cards Order forms

SOURCE OF ANALYSIS	V-TECS Catalog, Agricultural Equipment Parts Salesperson, Performance Objective 37. Agribusiness Procedures and Records, Lee, J., 1980.
ILLINOIS STATE GOALS FOR LEARNING	Language Arts: Goal 1-A: Recognition, recall, and summarization of material read. Goal 1-F: Integration of information from more than one text. Goal 3-C: Use of specific information of reasons to support and elaborate the main point. Mathematics: Goal 1-H: Application of computational and problem-solving skills to common life situations with or without a calculator.

TASK ANALYSIS

OCCUPATION	Landscape Gardener/Landscaper
DUTY AREA	Performing General Office Work
TASK	Establish a payroll system
PERFORMANCE STANDARD	Prepare a payroll system which summarizes all wages and deductions for each employee.
STEPS	1. For each employee prepare a payroll register which shows: a. Hours worked. b. Salary. c. Piece rates and commissions. 2. Select either a bookkeeping or computerized system which will: a. Compute gross pay per employee. b. Compute deductions per employee. c. Compute net pay per employee. d. Write paycheck.
KNOWLEDGE	Add and subtract whole numbers, decimals and fractions. Demonstrate problem-solving skills. Use equipment correctly. Apply mathematics for problem-solving.
ATTITUDES	Enjoys detail work. Recognizes the consequences of dishonesty. Enjoys working with numbers. Demonstrates punctuality. In addition, refer to the Employability Skills List.
SAFETY	Maintain a neat, organized work area.
EQUIPMENT AND MATERIALS	Payroll records Payroll forms
SOURCE OF ANALYSIS	Agribusiness Procedures and Records, Lee, J., 1980. Office Systems and Procedures, Luke, C. M. and Stiegler, C. B., 1987.

ILLINOIS STATE GOALS FOR LEARNING

Language Arts:

Goal 1-A: Recognition, recall, and summarization of material read.

Goal 1-F: Integration of information from more than one text.

Social Sciences:

Goal 5-A: Rational decision-making processes based on goals, values, and needs applied to selected consumer and social problems.

Mathematics:

Goal 6-F: Construction of tables and graphs to indicate selected trends or relationships.

TASK ANALYSIS

OCCUPATION	Landscape Gardener/Landscaper
DUTY AREA	Performing General Office Work
TASK	Prepare payroll
PERFORMANCE STANDARD	Prepare payroll for agribusiness employee which reflects gross wages, withholding and net pay.
STEPS	1. Calculate and record gross wages in record book. 2. Record items withheld by employee. 3. Record items paid by employer. 4. Calculate and record net wages. 5. Record deposits made to social security, federal income tax, state income tax, workman's compensation, profit-sharing plan, etc. 6. Record and prepare detailed statement for employer, employee and government agencies.
KNOWLEDGE	Add and subtract whole numbers, decimals and fractions. Follow written and oral instructions. Locate information to accomplish the task. Apply mathematics for problem-solving. Prepare written communication.
ATTITUDES	Enjoys detail work. Enjoys working with numbers. Follows rules and regulations. In addition, refer to the Employability Skills List.
SAFETY	Maintain a neat, organized work area.
EQUIPMENT AND MATERIALS	Business record book Deductions for wages Payroll rules and regulations
SOURCE OF ANALYSIS	V-TECS Catalog, Farm Business Manager, Performance Objective 15.

ILLINOIS STATE GOALS FOR LEARNING

Language Arts:

Goal 3-C: Use of specific information of reasons to support and elaborate the main point.

Mathematics:

Goal 1-H: Application of computational and problem-solving skills to common life situations with or without a calculator.

Goal 2-E: Application of percents in real-life situations.

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Education
For
Employment
Task Lists

Illinois
State Board of
Education

Adult
Vocational and
Technical Education

1988

TASK ANALYSIS

FOR

AGRICULTURAL OCCUPATIONS

CLUSTER: **AGRICULTURAL BUSINESS AND MANAGEMENT**

Duty Area: Applying Fertilizers and Chemicals

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Illinois Competency Based Vocational
Education Project
Housed At: Lake County Area
Vocational Center
19525 West Washington Street
Grayslake, IL 60030-1194
(312) 223-6681 or 620-8770

Tasks Analyzed by CBVE
Agricultural Occupations Consultant — Jerry Pepple, Ed.D.

CBVE Project Director — Urban T. Oen, Ph.D.

TASK ANALYSIS

FOR

AGRICULTURAL OCCUPATIONS

CLUSTER: **AGRICULTURAL BUSINESS AND MANAGEMENT**

Duty Area: Applying Fertilizers and Chemicals

TASK ANALYSIS

OCCUPATION	Fertilizer/Chemical Service Worker
DUTY AREA	Applying Fertilizers and Chemicals
TASK	Evaluate chemicals applied to test plots
PERFORMANCE STANDARD	Conduct a valid evaluation of a chemical test plot.
STEPS	1. Identify specific test plot. 2. Observe test plot at certain time intervals to gather the following information and data: a. Date and time of day. b. Weather conditions. c. Stage of crop growth. d. Soil and crop conditions. 3. Chart and follow a pattern to scout area of plot. 4. Record observations and findings. 5. Transfer field notes to evaluation form. 6. Report results to supervisor.
KNOWLEDGE	Add and subtract whole numbers, decimals and fractions. Use equipment correctly. Follow written and oral instructions. Locate information to accomplish the task. Use job-related terminology.
ATTITUDES	Enjoys detail work. Self motivating. Enjoys working with numbers. Follows rules and regulations. In addition, refer to the Employability Skills List.
SAFETY	Observe label recommendations when entering fields treated with chemicals.
EQUIPMENT AND MATERIALS	Field notebook Evaluation forms

SOURCE OF ANALYSIS

Field Crop Scouting Manual, Cooperative Extension Service, University of Illinois, 1984.
Controlling Weeds, VAS 4042a.
V-TECS Catalog, Chemical Sales/Chemical Applicator, Performance Objective 37.

ILLINOIS STATE GOALS FOR LEARNING

Language Arts:
- Goal 1-A: Recognition, recall, and summarization of material read.
- Goal 1-F: Integration of information from more than one text.
- Goal 3-A: Use of appropriate language and style in writing for a variety of purposes and audiences.

Mathematics:
- Goal 6-A: Interpretation of data from an experiment.
- Goal 6-C: Application of probabilities from experiment or from data.
- Goal 6-F: Construction of tables and graphs to indicate selected trends or relationships.

Biological and Physical Sciences:
- Goal 1-D: How two or more things interact and the effect each has on the other.
- Goal 1-I: Cause and effect relationships which allow predictions to be made.
- Goal 1-L: Stages, mechanisms, and rate of change.
- Goal 2-A: Relationships between science and technology.
- Goal 3-B: Basic scientific standards and research abilities.

TASK ANALYSIS

OCCUPATION	Fertilizer/Chemical Service Worker
DUTY AREA	Applying Fertilizers and Chemicals
TASK	Dispose of chemicals and containers according to manufacturer's specifications
PERFORMANCE STANDARD	Given chemicals and containers, dispose of them in a manner approved by the Environmental Protection Agency.
STEPS	1. Read chemical label before disposing of chemical or container. 2. Return surplus pesticides in original unopened containers to manufacturer. 3. Determine class of content from label. 4. Determine safety procedures from label. 5. Burn empty containers at approved burn site, except those that contain mercury, lead, cadmium, arsenic or inorganic pesticides. 6. Bury organic pesticides in specially designated landfills. 7. Rinse all nonburnable containers three times and dump rinse and leftover chemical into a specific toxic waste tank. 8. Puncture metal containers. 9. Locate burial site. 10. Excavate burial site. 11. Bury containers. 12. Clean equipment used.
KNOWLEDGE	Demonstrate problem-solving skills. Follow written and oral instructions. Locate information to accomplish the task. Read and comprehend written communication and information.
ATTITUDES	Recognizes the consequences of dishonesty. Minimizes occurrence of problems. Follows rules and regulations. In addition, refer to the Employability Skills List.
SAFETY	Wear proper clothing when handling chemicals. Observe label warnings when handling chemicals.

EQUIPMENT AND MATERIALS	Chemical containers
SOURCE OF ANALYSIS	Handling & Using Pesticides Safely, VAS 4045a. V-TECS Catalog, Chemical Sales/Chemical Applicator, Performance Objectives 1 and 10.
ILLINOIS STATE GOALS FOR LEARNING	Language Arts: Goal 1-A: Recognition, recall, and summarization of material read. Goal 1-C: Reading for various purposes and identification of text to accomplish each purpose. Biological and Physical Sciences: Goal 2-C: Relationships between the natural and technical world. Goal 2-G: Society's responsibility for improving the environment and protecting natural resources. Goal 2-H: Environmental issues in light of scientific and technological knowledge and ethical principles.

TASK ANALYSIS

OCCUPATION	Fertilizer/Chemical Service Worker
DUTY AREA	Applying Fertilizers and Chemicals
TASK	Prepare chemical program
PERFORMANCE STANDARD	Recommend a chemical control program for crop pests which considers environmental and cost factors.
STEPS	1. Review crop rotation plan for selected fields. 2. Review past pest problems for fields. 3. Determine what crop is to be grown. 4. Determine specific crops needing control. 5. Determine proper pesticides to use to control pests. 6. Determine economic injury level of the pests. 7. Make final recommendation to apply or not apply chemical.
KNOWLEDGE	Demonstrate problem-solving skills. Follow written and oral instructions. Locate information to accomplish the task. Read and comprehend written communication and information.
ATTITUDES	Enjoys detail work. Enjoys working with numbers. Enjoys working with people. In addition, refer to the Employability Skills List.
SAFETY	Follow label directions and application rates and procedures when recommending chemicals.
EQUIPMENT AND MATERIALS	Cropping plan Crop-scouting report List of pesticides
SOURCE OF ANALYSIS	V-TECS Catalog, Chemical Sales/Chemical Applicator, Performance Objectives 30 and 31.

ILLINOIS STATE GOALS FOR LEARNING

Language Arts:

- Goal 1-A: Recognition, recall, and summarization of material read.
- Goal 1-F: Integration of information from more than one text.
- Goal 3-A: Use of appropriate language and style in writing for a variety of purposes and audiences.
- Goal 3-C: Use of specific information of reasons to support and elaborate the main point.

Mathematics:

- Goal 1-H: Application of computational and problem-solving skills to common life situations with or without a calculator.
- Goal 2-E: Application of percents in real-life situations.
- Goal 6-E: Interpretation of tables, graphs, charts, arrays, schedules, experiments, and surveys repeated in media sources.
- Goal 7-G: Application of problem-solving procedures to solve or suggest a solution to a given problem.

TASK ANALYSIS

OCCUPATION: Fertilizer/Chemical Service Worker

DUTY AREA: Applying Fertilizers and Chemicals

TASK: Calculate application rates

PERFORMANCE STANDARD: Calculate the correct application rate to apply the desired amount of chemical ingredient according to label recommendations.

STEPS:

1. Read the label so that the proper application rate may be determined.
2. For dry chemicals:
   a. Determine application setting.
   b. Determine width of application.
   c. Determine speed of travel.
   d. Adjust output or speed to change application rate.
3. For liquid chemicals:
   a. Calculate amount of chemical applied per volume of mix.
   b. Select desired nozzles.
   c. Determine desired pressure.
   d. Measure nozzle flow rate.
   e. Determine ground speed.
   f. Determine spray width per nozzle.
   g. Adjust output or speed to change application rate.

KNOWLEDGE:
Add and subtract whole numbers, decimals and fractions.
Demonstrate problem-solving skills.
Use equipment correctly.
Follow written and oral instructions.
Apply mathematics for problem solving.

ATTITUDES:
Enjoys detail work.
Enjoys working with numbers.
Follows rules and regulations.
In addition, refer to the Employability Skills List.

SAFETY:
Dress properly when handling and using pesticides.
Observe all label directions and warnings.

EQUIPMENT AND MATERIALS	Chemical application equipment Pesticide
SOURCE OF ANALYSIS	V-TECS Catalog, Chemical Sales/Chemical Applicator, Performance Objective 16. Illinois Pesticide Applicator Study Guide (revised), Cooperative Extension Service, University of Illinois.
ILLINOIS STATE GOALS FOR LEARNING	Language Arts: Goal 1-A: Recognition, recall, and summarization of material read. Goal 1-C: Reading for various purposes and identification of text to accomplish each purpose. Goal 1-G: Justification and explanation of answers to questions about material read. Mathematics: Goal 1-H: Application of computational and problem-solving skills to common life situations with or without a calculator. Goal 3-E: Application of selected measurement systems, instruments, and techniques. Goal 4-B: Ability to solve simple equations and inequalities and interpret the solutions.

TASK ANALYSIS

OCCUPATION	Fertilizer/Chemical Service Worker
DUTY AREA	Applying Fertilizers and Chemicals
TASK	Calculate proportions of chemical and carrying agents
PERFORMANCE STANDARD	Calculate the correct proportions of the chemicals and carrying agents to provide for the desired application method and rate.
STEPS	1. Select compatible chemicals and carrying agents. 2. Determine how much the sprayer tank holds. 3. Read label of chemical to determine the amount of formulation to be used. 4. Determine how to adjust how many gallons of spray/unit area the equipment will apply. 5. Determine how much chemical to put into the tank to apply correct application. 6. Divide the total gallon capacity of the tank by the gallons applied per acre or given area. 7. Add the amount of chemical to sprayer tank according to specific chemical directions on the label. 8. Finish filling sprayer tank with water.
KNOWLEDGE	Add and subtract whole numbers, decimals and fractions. Demonstrate problem-solving skills. Use equipment correctly. Locate information to accomplish the task. Apply mathematics for problem solving.
ATTITUDES	Enjoys detail work. Enjoys working with numbers. Follows rules and regulations. In addition, refer to the Employability Skills List.
SAFETY	Observe label recommendations when mixing chemicals.
EQUIPMENT AND MATERIALS	Pesticide Pesticide application equipment

SOURCE OF ANALYSIS	The New Pesticide User's Guide, Bohomont, B. L., 1986. V-TECS Catalog, Chemical Sales/Chemical Applicator, Performance Objective 17.
ILLINOIS STATE GOALS FOR LEARNING	Language Arts: Goal 1-C: Reading for various purposes and identification of text to accomplish each purpose. Mathematics: Goal 1-H: Application of computational and problem-solving skills to common life situations with or without a calculator. Goal 3-E: Application of selected measurement systems, instruments, and techniques.

TASK ANALYSIS

OCCUPATION	Fertilizer/Chemical Service Worker
DUTY AREA	Applying Fertilizers and Chemicals
TASK	Calibrate spraying equipment
PERFORMANCE STANDARD	Calibrate spraying equipment to provide amount of chemical per acre according to the chemical label.
STEPS	1. Select the spray application rate in gallons per acre (GPA). 2. Determine appropriate ground speed in miles per hour (MPH). 3. Determine the effective spray width per nozzle in inches. 4. Determine the flow rate required from each nozzle in gallons per minute (GPM). 5. Select nozzle to give desired flow rate when operated at recommended pressure range. 6. Determine required flow rate for each nozzle in ounces per minute (OPM). 7. Collect output from one or more nozzles to measure output rate. 8. Recheck calibration rate frequently.
KNOWLEDGE	Add and subtract whole numbers, decimals and fractions. Demonstrate willingness to learn. Use equipment correctly. Follow written and oral instructions. Apply mathematics for problem solving.
ATTITUDES	Enjoys detail work. Enjoys working with numbers. Follows rules and regulations. In addition, refer to the Employability Skills List.
SAFETY	Observe label directions when mixing chemicals.
EQUIPMENT AND MATERIALS	Pesticide Pesticide applicator

SOURCE OF ANALYSIS	Pesticide Use, VAS 4084. V-TECS Catalog, Chemical Sales/Chemical Applicator, Performance Objective 18.
ILLINOIS STATE GOALS FOR LEARNING	Mathematics: Goal 1-E: Application of properties of numbers and operations. Goal 1-H: Application of computational and problem-solving skills to common life situations with or without a calculator. Goal 3-E: Application of selected measurement systems, instruments, and techniques. Goal 4-D: Ability to evaluate, solve, and apply formulas with and without calculators.

TASK ANALYSIS

OCCUPATION	Fertilizer/Chemical Service Worker
DUTY AREA	Applying Fertilizers and Chemicals
TASK	Prepare fertilizer program
PERFORMANCE STANDARD	Prepare a fertilizer program which will maintain or build up the fertility level of the soil as determined by the customer's wants and needs.
STEPS	1. Review most recent soil test and plant tissue test. 2. Review fertilizer and crop program of the last three years. 3. Compute probable response from the use of various amounts of nutrients required to meet crop goals. 4. Select fertilizer which will: a. Meet crop goal. b. Have suitable method of application. c. Be cost efficient. 5. Compute micronutrients required by soil test results. 6. Compute lime required by soil test results. 7. Review program recommendations with customer.
KNOWLEDGE	Add and subtract whole numbers, decimals and fractions. Demonstrate problem-solving skills. Use equipment correctly. Follow written and oral instructions. Locate information to accomplish the task.
ATTITUDES	Enjoys working with numbers. Enjoys working with people. Follows rules and regulations. Exhibits the ability to handle pressure and tension. In addition, refer to the Employability Skills List.
SAFETY	Follow established guidelines when blending fertilizers.
EQUIPMENT AND MATERIALS	Fertilizer Crop rotation schedule

SOURCE OF ANALYSIS	Planning a Fertilizer Program, VAS 4010a. V-TECS Catalog, Chemical Sales/Chemical Applicator, Performance Objective 3.
ILLINOIS STATE GOALS FOR LEARNING	Language Arts: Goal 1-A: Recognition, recall, and summarization of material read. Goal 1-F: Integration of information from more than one text. Mathematics: Goal 1-H: Application of computational and problem-solving skills to common life situations with or without a calculator.

TASK ANALYSIS

OCCUPATION	Fertilizer/Chemical Service Worker
DUTY AREA	Applying Fertilizers and Chemicals
TASK	Map chemical applications
PERFORMANCE STANDARD	Prepare map of chemical applications which documents the location, use and effectiveness of selected chemicals.
STEPS	1. Design map to scale to show proper dimensions and shape of field or area. Indicate points of reference and physical features. 2. Designate the use of specific chemicals in area of use. 3. Make notes on condition of soil and weather at time of application. 4. Continue notes at selected time intervals throughout growing season. 5. Note additional application of chemicals during growing season, if applicable. 6. Note pests not controlled by chemical application.
KNOWLEDGE	Add and subtract whole numbers, decimals and fractions. Demonstrate problem-solving skills. Use equipment correctly. Follow written and oral instructions. Locate information to accomplish the task.
ATTITUDES	Enjoys detail work. Enjoys working with numbers. Follows rules and regulations. In addition, refer to the Employability Skills List.
SAFETY	Observe proper dress for field-scouting conditions.
EQUIPMENT AND MATERIALS	Field map
SOURCE OF ANALYSIS	Field Crop Scouting Manual, Cooperative Extension Service, University of Illinois, 1984.

ILLINOIS STATE GOALS FOR LEARNING

Language Arts:

Goal 3-C: Use of specific information of reasons to support and elaborate the main point.

Mathematics:

Goal 6-A: Interpretation of data from an experiment.

Goal 6-C: Application of probabilities from experiment or from data.

Goal 6-F: Construction of tables and graphs to indicate selected trends or relationships.

TASK ANALYSIS

OCCUPATION	Fertilizer/Chemical Service Worker
DUTY AREA	Applying Fertilizers and Chemicals
TASK	Formulate fertilizer
PERFORMANCE STANDARD	Formulate a fertilizer blend according to specified amounts on customer purchase order.
STEPS	1. Calculate amount of raw fertilizer materials required to make formulation. 2. Grade fertilizer according to its nutritive value. 3. Operate blender to make desired blend formulations. 4. Test formulation for correct analysis. 5. Treat material with acid. 6. Combine NH3 and superphosphate. 7. Pelletize fertilizer material. 8. Bag or transfer fertilizer to delivery truck.
KNOWLEDGE	Add and subtract whole numbers, decimals and fractions. Use equipment correctly. Follow written and oral instructions. Apply mathematics for problem solving.
ATTITUDES	Enjoys detail work. Enjoys working with numbers. Enjoys working with people. Follows rules and regulations. In addition, refer to the Employability Skills List.
SAFETY	Observe recommended procedures when handling fertilizers.
EQUIPMENT AND MATERIALS	Fertilizer Fertilizer blender
SOURCE OF ANALYSIS	Soil Fertility and Fertilizers, Tisdale, S. L. and Nelson, W. L., 1975.

ILLINOIS STATE GOALS FOR LEARNING

Mathematics:

Goal 1-E: Application of properties of numbers and operations.

Goal 2-C: Application of rates and proportions to real-life situations.

Goal 2-E: Application of percents in real-life situations.

TASK ANALYSIS

OCCUPATION	Fertilizer/Chemical Service Worker
DUTY AREA	Applying Fertilizers and Chemicals
TASK	Test soil
PERFORMANCE STANDARD	Take a soil sample and prepare it for analysis by a laboratory.
STEPS	1. Locate soil sampling equipment and soil sample container. 2. Identify the sample on the sample container. 3. Record cropping information on soil test information sheet. 4. Draw sketch of the area to be sampled. 5. Determine if field is uniform in soil type. 6. Divide the field into uniform sampling areas. 7. Calculate number of samples needed to accurately measure soil fertility levels. 8. Collect samples and mix the soil. 9. Fill soil sample bag and label according to location.
KNOWLEDGE	Add and subtract whole numbers, decimals and fractions. Demonstrate problem-solving skills. Follow written and oral instructions. Locate information to accomplish the task. Apply mathematics for problem solving. Prepare written communication. Write legibly.
ATTITUDES	Enjoys working with numbers. Enjoys working with people. Follows rules and regulations. In addition, refer to the Employability Skills List.
SAFETY	Observe proper dress for field environment.
EQUIPMENT AND MATERIALS	Soil sampler Field map Soil bags

SOURCE OF ANALYSIS	Collecting and Preparing Soil Samples, VAS 4001a. V-TECS Catalog, Chemical Sales/Chemical Applicator, Performance Objective 36.
ILLINOIS STATE GOALS FOR LEARNING	Language Arts: Goal 1-A: Recognition, recall, and summarization of material read. Goal 3-C: Use of specific information of reasons to support and elaborate the main point. Mathematics: Goal 1-E: Application of properties of numbers and operations. Social Sciences: Goal 4-B: Use of maps and models as primary geographic tools.

TASK ANALYSIS

OCCUPATION	Fertilizer/Chemical Service Worker
DUTY AREA	Applying Fertilizers and Chemicals
TASK	Compute fertilizer costs
PERFORMANCE STANDARD	Calculate the cost of handling and applying fertilizer and quote a price to a customer.
STEPS	1. Calculate rate to be applied times cost per pound, gallon or ounce. 2. Calculate per rate cost times total area to be covered. 3. Sum the total cost of each fertilizer which is to be applied through blend or mix. 4. Calculate application costs. 5. Sum the total fertilizer costs and total application costs.
KNOWLEDGE	Add and subtract whole numbers, decimals and fractions. Demonstrate problem-solving skills. Use equipment correctly. Follow written and oral instructions. Apply mathematics for problem solving.
ATTITUDES	Enjoys working with numbers. Follows rules and regulations. Exhibits the ability to handle pressure and tension. In addition, refer to the Employability Skills List.
SAFETY	Clean up work area when job is completed. Keep food and drink away from electronic calculating equipment.
EQUIPMENT AND MATERIALS	Fertilizer price lists Business sales forms
SOURCE OF ANALYSIS	Soil Fertility and Fertilizers, Tisdale, S. L. and Nelson, W. L., 1975.

ILLINOIS STATE GOALS FOR LEARNING

Mathematics:

Goal 1-E: Application of properties of numbers and operations.

TASK ANALYSIS

OCCUPATION	Fertilizer/Chemical Service Worker
DUTY AREA	Applying Fertilizers and Chemicals
TASK	Make fertilizer and lime recommendations
PERFORMANCE STANDARD	Prepare a recommendation for fertilizer and lime which is appropriate for the production goals, cropping system and is economically sound.

STEPS

1. Study the most recent soil tests and plant tissue tests.
2. Determine nutrient needs of the planned cropping system.
3. Calculate required nutrients to fulfill needs identified by soil and plant tissue tests.
4. Determine any nutrient carryover from previous crops which will be available for planned crops.
5. Determine proper fertilizer and lime blend to use.
6. Prepare a report to deliver to customer with description of recommendations.
7. Explain proper method of application.
8. Explain proper application time.
9. Quote price of fertilizer and lime to customer.
10. Determine if the economic returns warrant the expense of the recommended level of fertilizer and lime treatment.

KNOWLEDGE

Demonstrate problem-solving skills.
Use equipment correctly.
Follow written and oral instructions.
Listen attentively.
Apply mathematics for problem solving.
Speak effectively with others.

ATTITUDES

Controls emotions.
Show empathy, respect and support for others.
Enjoys working with numbers.
Enjoys working with people.
In addition, refer to the Employability Skills List.

SAFETY

Clean up work area when assignment is completed.
Keep food and drinks away from electronic office machines.

EQUIPMENT AND MATERIALS	Business worksheets and forms Customer cropping plan Fertilizer price lists
SOURCE OF ANALYSIS	V-TECS Catalog, Chemical Sales/Chemical Applicator, Performance Objective 31. Planning the Nitrogen Program, VAS 4009b. Planning a Fertilizer Program, VAS 4010a.
ILLINOIS STATE GOALS FOR LEARNING	Language Arts: Goal 1-A: Recognition, recall, and summarization of material read. Goal 3-C: Use of specific information of reasons to support and elaborate the main point. Mathematics: Goal 1-E: Application of properties of numbers and operations. Social Sciences: Goal 1-O: Effects of basic economic principles on producers and consumers in the public and private sectors. Goal 4-I: Ways people depend on, evaluate, and use natural environments to extract needed resources, grow crops, and develop settlements.

TASK ANALYSIS

OCCUPATION	Fertilizer/Chemical Service Worker
DUTY AREA	Applying Fertilizers and Chemicals
TASK	Compute chemical costs
PERFORMANCE STANDARD	Compute the cost of a recommended chemical program when considering the profit percentage, overhead costs, grade and demand for the product.
STEPS	1. Select chemicals to be priced. 2. Obtain data on purchase cost of chemicals. 3. Estimate overhead cost of handling chemicals. 4. Determine required profit percentage. 5. Determine cost of any special treatments required by selected chemicals. 6. Determine labor requirements. 7. Determine tax costs. 8. Determine total cost of chemicals.
KNOWLEDGE	Add and subtract whole numbers, decimals and fractions. Demonstrate problem-solving skills. Use equipment correctly. Follow written and oral instructions. Listen attentively. Apply mathematics for problem solving.
ATTITUDES	Enjoys detail work. Enjoys working with numbers. Enjoys working with people. Assumes responsibility for own actions and decisions. Exhibits the ability to handle pressure and tension. In addition, refer to the Employability Skills List.
SAFETY	Clean up work area when assignment is completed. Keep food and drinks away from calculating machines.
EQUIPMENT AND MATERIALS	Chemical price lists Customer cropping plan Business forms and worksheets

SOURCE OF ANALYSIS	V-TECS Catalog, Ornamental Horticulture Production Occupations, Performance Objectives 160 and 165.
ILLINOIS STATE GOALS FOR LEARNING	Language Arts: Goal 1-A: Recognition, recall, and summarization of material read. Mathematics: Goal 1-E: Application of properties of numbers and operations. Goal 1-H: Application of computational and problem-solving skills to common life situations with or without a calculator. Goal 2-E: Application of percents in real-life situations.

TASK ANALYSIS

OCCUPATION	Fertilizer/Chemical Service Worker
DUTY AREA	Applying Fertilizers and Chemicals
TASK	Identify fertilizer deficiency symptoms
PERFORMANCE STANDARD	Identify plant nutrient deficiencies from selected plant parts.
STEPS	1. Identify soil elements that can become deficient. 2. Secure a chart showing different nutrient deficiencies for different crops. 3. Compare plant characteristics with those identified on the charts. 4. Identify deficient nutrients.
KNOWLEDGE	Demonstrate problem-solving skills. Use equipment correctly. Locate information to accomplish the task. Use job-related terminology.
ATTITUDES	Enjoys detail work. Follows rules and regulations. In addition, refer to the Employability Skills List.
SAFETY	Clean up work area when assignment is completed. Read and follow directions on chemical labels when using them.
EQUIPMENT AND MATERIALS	Nutrient chart Plants with nutrient deficiencies
SOURCE OF ANALYSIS	V-TECS Catalog, Chemical Sales/Chemical Applicator, Performance Objective 25.
ILLINOIS STATE GOALS FOR LEARNING	Language Arts: Goal 1-A: Recognition, recall, and summarization of material read. Goal 1-C: Reading for various purposes and identification of text to accomplish each purpose.

ILLINOIS STATE GOALS FOR LEARNING (Cont.)

Social Sciences:

Goal 4-I: Ways people depend on, evaluate, and use natural environments to extract needed resources, grow crops, and develop settlements.

Biological and Physical Sciences:

Goal 1-E: Common characteristics of plant and animal communities.

Goal 4-A: Observation.

TASK ANALYSIS

OCCUPATION	Fertilizer/Chemical Service Worker
DUTY AREA	Applying Fertilizers and Chemicals
TASK	Time fertilizer and chemical applications
PERFORMANCE STANDARD	Prepare fertilizer and chemical application schedule which supplements the cropping plans.
STEPS	1. Consult crop rotation sheet. 2. Calculate timing of fertilizer and chemicals to fit the crop rotation schedule and the plant growth pattern for efficient uptake of chemicals. 3. Prepare chart for the scheduled fertilizer and chemical applications to hold or accelerate plants as required for production schedules. 4. Record all fertilizer and chemical applications and observations noting date, time and amount.
KNOWLEDGE	Add and subtract whole numbers, decimals and fractions. Demonstrate problem-solving skills. Use equipment correctly. Identify different types of merchandise/products offered by the business. Apply mathematics for problem solving.
ATTITUDES	Enjoys working with numbers. Enjoys working with people. Follows rules and regulations. In addition, refer to the Employability Skills List.
SAFETY	Clean up work area when assignment is completed.
EQUIPMENT AND MATERIALS	Crop rotation sheets List of fertilizers Customer cropping schedule Business worksheets
SOURCE OF ANALYSIS	Greenhouse Management, Nelson, K. S., 1982. Greenhouse Flowers and Bedding Plants, 2nd Ed., Williams, G. S. and Shumack, R. L., 1984.

ILLINOIS STATE GOALS FOR LEARNING

Language Arts:

Goal 1-A: Recognition, recall, and summarization of material read.

Goal 3-C: Use of specific information of reasons to support and elaborate the main point.

Mathematics:

Goal 6-F: Construction of tables and graphs to indicate selected trends or relationships.

Biological and Physical Sciences:

Goal 1-L: Stages, mechanisms, and rate of change.

TASK ANALYSIS

OCCUPATION	Fertilizer/Chemical Service Worker
DUTY AREA	Applying Fertilizers and Chemicals
TASK	Maintain chemical files
PERFORMANCE STANDARD	Maintain a file of all chemicals used and sold following appropriate filing procedures.
STEPS	1. Complete customer data sheet for chemicals. 2. Code sheets for filing. 3. Arrange materials for filing using appropriate system to sort them by alphabet, number and/or geographic area. 4. Prepare labels for file folders and dividers. 5. Arrange file data with latest information toward the front of the folder.
KNOWLEDGE	Add and subtract whole numbers, decimals and fractions. Use equipment correctly. Follow written and oral instructions. Identify different types of merchandise/products offered by the business. Locate information to accomplish the task.
ATTITUDES	Enjoys detail work. Enjoys working with numbers. Enjoys working with people. In addition, refer to the Employability Skills List.
SAFETY	Clean up work area when assignment is completed.
EQUIPMENT AND MATERIALS	Customer data sheet Code sheets File labels
SOURCE OF ANALYSIS	Office Procedures and Technology, Moon, H. R., 1984.

ILLINOIS STATE GOALS FOR LEARNING

Language Arts:

Goal 1-C: Reading for various purposes and identification of text to accomplish each purpose.

Biological and Physical Sciences:

Goal 3-B: Systematization of data to maintain an orderly manner of review.

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Education
For
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Task Lists

Illinois
State Board of
Education

Adult
Vocational and
Technical Education

1988

CLUSTER MATRICES

FOR

AGRICULTURAL OCCUPATIONS

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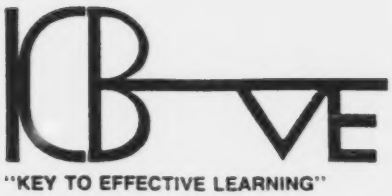

Illinois Competency Based Vocational
Education Project
Housed At: Lake County Area
Vocational Center
19525 West Washington Street
Grayslake, IL 60030-1194
(312) 223-6681 or 620-8770

Cluster Matrices Developed by CBVE

Agricultural Occupations Consultant — Jerry Pepple, Ed.D.

CBVE Project Director — Urban T. Oen, Ph.D.

Education
For
Employment
Task Lists

Illinois
State Board of
Education

Adult
Vocational and
Technical Education

AGRICULTURAL OCCUPATIONS

1988

AGRICULTURAL BUSINESS AND MANAGEMENT CLUSTER

Salesperson, Animal-Feed Products
Salesperson, Farm Equipment and Supplies
Fertilizer/Chemical Service Worker
Farmer, General
Scout/Pest Control Worker/Agriculture
Grain Elevator Operator
Veterinary Assistant
Salesperson, Parts, Agricultural Equipment
Dairy Processing Equipment Operator
*Employability Skills

*Employability skills are a vital component of vocational education programs and should be incorporated into each occupational task list

NOTE:

The duties and tasks found in these matrices form the basis of instructional content for secondary, postsecondary and adult occupational training programs. Orientation level instruction, usually offered in grades 9, 10, and 11, is a vital component of all vocational education programs and provides a strong foundation and vehicle for transitioning into occupational training programs.

These materials were prepared under contract with the Illinois State Board of Education, Department of Adult, Vocational and Technical Education ("Illinois Competency Based Vocational Education Project," contract number PS-10-130).

SA = Salesperson, Animal-Feed Products
SF = Salesperson, Farm Equipment and Supplies
FC = Fertilizer/Chemical Service Worker
FG = Farmer, General
SC = Scout/Pest Control Worker/Agriculture
EO = Grain Elevator Operator
VA = Veterinary Assistant
SE = Salesperson, Parts, Agricultural Equipment
DO = Dairy Processing Equipment Operator

FORMULATING LIVESTOCK FEEDING PROGRAMS

		SA	SF	FC	FG	SC	EO	VA	SE	DO
105A001	Evaluate livestock production records	X			X					
105A002	Assess livestock needs, such as growing and fattening, nursing, production or special nutritional needs	X			X					
105A003	Identify feed formula for livestock needs	X			X					
105A004	Balance rations	X			X					
105A005	Substitute feed ingredients	X			X					
105A006	Mix feed additives and medications	X			X					
105A007	Analyze feed nutritional value	X			X					
105A008	Compute feed cost per pound gain	X			X					
105A009	Evaluate feeding program	X			X					
105A010	Plan feeding program	X			X					
105A011	Record daily feed consumption				X					

PERFORMING SALES DUTIES

		SA	SF	FC	FG	SC	EO	VA	SE	DO
105B001	Determine customer needs	X	X		X		X	X	X	
105B002	Locate merchandise	X	X	X		X	X	X	X	
105B003	Compute sales tax	X	X			X	X	X	X	
105B004	Complete sales slip	X	X			X	X		X	
105B005	Inform customer of warranty and guarantee specifications	X	X			X			X	
105B006	Close sale	X	X				X		X	
105B007	Conduct sale	X	X				X		X	
105B008	Complete business forms	X	X	X	X	X	X	X	X	
105B009	Communicate orally with clients	X	X	X		X	X	X	X	
105B010	Explain federal and state laws regarding the grain elevator business						X			
105B011	Explain legal responsibilities of business which deal with interstate commerce						X			
105B012	Develop hedging programs appropriate for grain elevator business						X			
105B013	Determine potential volume of grain produced in trade territory using crop reports						X			
105B014	Determine the possible returns from different methods of marketing grain						X			
105B015	Explain the relationship of cash grain prices to futures markets						X			
105B016	Develop basis chart for various commodities						X			
105B017	Compute margins						X			
105B018	Price grain based on grade, weight and quality						X			
105B019	Compute markup						X			

PERFORMING SALES-RELATED DUTIES

		SA	SF	FC	FG	SC	EO	VA	SE	DO
105C001	Open store or department	X	X				X	X	X	
105C002	Process debit card sales transaction	X	X				X	X	X	
105C003	Process charge card sales transaction	X	X				X	X	X	
105C004	Package customer purchase	X	X						X	
105C005	Arrange delivery of merchandise	X	X				X		X	
105C006	Process customer complaints	X	X				X	X	X	
105C007	Close out cash register	X	X					X	X	
105C008	Close store or department	X	X				X	X	X	
105C009	Process customer refund on sale	X	X				X	X	X	
105C010	Process cash sales transaction	X	X				X	X	X	
105C011	Order supplies and stock	X	X		X	X	X	X	X	
105C012	Process incoming order	X	X				X	X	X	
105C013	Return unuseable merchandise	X	X				X	X	X	
105C014	Code and date merchandise	X	X	X				X	X	
105C015	Label and price merchandise	X	X	X				X	X	
105C016	Update prices on merchandise	X	X				X	X	X	
105C017	Stock merchandise displays	X	X					X	X	
105C018	Store merchandise in storage area	X	X	X	X	X	X	X	X	
105C019	Rotate supplies and stock	X	X	X	X		X	X	X	
105C020	Greet and meet people	X	X	X		X	X	X	X	
105C021	Weigh grain as it arrives at the elevator						X			
105C022	Use balances, moisture testers, screens and dockage machines in grading grain						X			
105C023	Draw representative sample of grain from truck or railroad car						X			
105C024	Grade grain according to USDA Grain Standards Act						X			
105C025	Blend various qualities of grain to meet grade standards						X			
105C026	Label seed in accordance with state laws						X			
105C027	Supply parts to service shop								X	
105C028	Use microfiche to determine part number								X	
105C029	Use microfiche to determine part availability								X	
105C030	Use parts catalog to determine part number								X	
105C031	Use computer inventory system to determine part availability								X	

MARKETING ANIMALS AND ANIMAL PRODUCTS

		SA	SF	FC	FG	SC	EO	VA	SE	DO
105D001	Plan marketing schedule				X					
105D002	Select markets				X					
105D003	Sort and mark animals for market				X					

PERFORMING PROMOTIONAL ACTIVITIES

		SA	SF	FC	FG	SC	EO	VA	SE	DO
105E001	Maintain customer file system	X	X	X		X	X		X	
105E002	Plan territory management	X	X			X	X			
105E003	Analyze and interpret market information	X	X			X	X			
105E004	Prepare advertisements	X	X						X	
105E005	Conduct sales promotional meetings	X	X	X						
105E006	Identify potential buyers	X	X				X		X	
105E007	Provide technical assistance to customers	X	X	X		X	X		X	
105E008	Plan a sales promotional meeting	X	X	X						

		SA	SF	FC	FG	SC	EO	VA	SE	DO
105E009	Build merchandise displays								X	
105E010	Calculate customer discount								X	

FINANCING THE AGRIBUSINESS

		SA	SF	FC	FG	SC	EO	VA	SE	DO
105F001	Calculate net worth of machinery				X		X			
105F002	Calculate net worth of animals				X					
105F003	Calculate net worth of land				X					
105F004	Calculate operating expenses				X		X			
105F005	Prepare cash flow projections	X	X		X		X		X	
105F006	Prepare financial statements	X	X		X		X			
105F007	Interpret financial statements	X	X		X		X		X	
105F008	Prepare budget	X	X		X		X		X	
105F009	Develop credit plan	X	X		X		X		X	
105F010	Complete business loan application process				X		X			
105F011	Prepare tax statements	X	X		X		X			
105F012	Calculate insurance needs	X	X		X		X			
105F013	Prepare depreciation schedule	X	X		X		X			
105F014	Prepare bank deposits	X	X		X		X		X	
105F015	Prepare cash flow statement	X	X		X		X			
105F016	Record accounts payable in computerized bookkeeping system	X	X		X		X		X	
105F017	Record accounts receivable in computerized bookkeeping system	X	X		X		X		X	
105F018	Balance charge receipts and cash tickets								X	

PERFORMING GENERAL OFFICE WORK

		SA	SF	FC	FG	SC	EO	VA	SE	DO
105G001	Establish filing system	X	X		X		X	X	X	
105G002	Establish file index	X	X	X	X	X	X	X	X	
105G003	File materials, such as receipts, letters documents, specifications and orders	X	X	X	X	X	X	X	X	
105G004	Write field reports (prepare reports)	X	X	X	X	X	X	X	X	
105G005	Type reports	X	X	X	X	X	X	X	X	
105G006	Process incoming mail	X	X		X	X	X	X	X	
105G007	Process outgoing mail	X	X		X	X	X	X	X	
105G008	Maintain mailing lists	X	X			X	X	X	X	
105G009	Schedule appointments and meetings	X	X		X	X	X	X	X	
105G010	Process incoming telephone calls	X	X	X	X	X	X	X	X	
105G011	Process outgoing telephone calls	X	X	X	X	X	X	X	X	
105G012	Duplicate materials	X	X				X	X	X	
105G013	Clean work area	X	X	X	X	X	X	X	X	
105G014	Make minor office equipment repairs	X	X	X	X	X	X	X	X	
105G015	Read crop pest management calendar		X	X	X	X				
105G016	Collect pest samples for laboratory analysis			X	X	X				
105G017	Read livestock pest management calendar	X			X					
105G018	Admit animals to clinic							X		
105G019	Discharge animals from clinic							X		
105G020	Notify clients of appointments							X		

MANAGING THE BUSINESS

		SA	SF	FC	FG	SC	EO	VA	SE	DO
105H001	Conduct periodic inspection of merchandise	X	X	X	X	X	X	X	X	
105H002	Conduct inventory of merchandise	X	X	X	X	X	X	X	X	
105H003	Maintain inventory records	X	X	X	X	X	X	X	X	

		SA	SF	FC	FG	SC	EO	VA	SE	DO
105H004	Plan work schedule	X	X	X	X	X	X	X	X	
105H005	Determine labor needs				X		X	X	X	
105H006	Evaluate employee performance				X		X			
105H007	Maintain quality control records	X	X	X	X	X	X	X	X	
105H008	Evaluate agribusiness productivity	X	X		X		X		X	
105H009	Supervise agriculture workers	X	X		X		X		X	
105H010	Prepare payroll	X	X		X		X			
105H011	Calculate payroll deductions	X	X		X		X			
105H012	Maintain production records				X					
105H013	Maintain animal records				X			X		
105H014	Maintain equipment records	X	X	X	X	X	X	X	X	
105H015	Develop land use program				X					
105H016	Follow time management schedule	X	X	X	X	X	X	X	X	
105H017	Follow work schedules	X	X	X	X	X	X	X	X	
105H018	Purchase machinery and equipment				X		X			
105H019	Select computer software for records and reports				X		X			
105H020	Select computer software for livestock management decisions				X					
105H021	Select computer software for crop management decisions				X		X			
105H022	Select computer software for machinery management decisions				X					
105H023	Utilize a computerized network on agricultural marketing and management				X		X			
105H024	Utilize computerized inventory control system	X	X	X	X	X				
105H025	Establish computerized inventory control system						X			
105H026	Examine returned parts for defects								X	
105H027	Receive new shipment of parts based on packing slip								X	
105H028	Use computer software for records and reports							X		
105H029	Use computerized inventory system							X		

ASSEMBLING, SERVICING AND MAINTAINING EQUIPMENT AND FACILITIES

		SA	SF	FC	FG	SC	EO	VA	SE	DO
105I001	Service business vehicle	X	X	X	X	X	X		X	
105I002	Service conveyor equipment	X		X	X		X			
105I003	Clean and fumigate storage facility	X	X	X	X		X			
105I004	Maintain hand tools	X	X	X	X	X	X			
105I005	Service electrical outlets and extensions	X	X	X	X	X	X			
105I006	Assemble planting equipment		X		X					
105I007	Assemble tillage equipment		X		X					
105I008	Perform maintenance checks on equipment	X	X	X	X	X		X		
105I009	Calibrate equipment	X	X	X	X	X	X			
105I010	Maintain service records		X	X	X	X	X		X	
105I011	Assemble applicating pumps		X	X	X					
105I012	Assemble boom type chemical equipment		X	X	X					
105I013	Change cartridge air filters		X	X	X					
105I014	Change nozzles on applicators		X	X	X	X				
105I015	Check working condition of respirator		X	X	X	X				
105I016	Clean granular application equipment		X	X	X	X				
105I017	Clean liquid application equipment		X	X	X	X				
105I018	Lubricate equipment			X	X					
105I019	Install spreader fan on shaft		X	X	X					
105I020	Install drive wheel on applicating equipment			X	X					
105I021	Paint equipment			X	X					

		SA	SF	FC	FG	SC	EO	VA	SE	DO
105I022	Replace bearings			X	X		X			
105I023	Replace belts			X	X		X			
105I024	Replace booms			X	X					
105I025	Replace drag chains			X	X		X			
105I026	Replace impeller pump			X	X					
105I027	Replace worn chain links			X	X		X			
105I028	Replace universal joints			X	X		X			
105I029	Repair electrical defects			X	X		X			
105I030	Troubleshoot equipment failure			X	X		X		X	
105I031	Prepare equipment for off-season storage		X	X	X		X			
105I032	Service fuel systems			X	X	X	X			
105I033	Service electrical systems			X	X	X	X			
105I034	Service lubrication systems			X	X	X	X			
105I035	Service cooling systems			X	X	X	X			
105I036	Test engine compression			X	X		X			
105I037	Repair equipment utilizing shielded metal arc welding			X	X		X			
105I038	Repair equipment utilizing oxy-fuel (OAW) equipment			X	X		X			
105I039	Cut and pierce metal utilizing OAW equipment			X	X		X			
105I040	Cut and pierce metal utilizing SMAW equipment			X	X		X			
105I041	Perform maintenance checks						X			
105I042	Paint applicating equipment						X			
105I043	Care for and maintain scales						X			
105I044	Clean various surfaces							X		
105I045	Disinfect pens, cages and runs							X		
105I046	Sterilize injection equipment							X		
105I047	Sterilize surgical instruments and equipment using autoclave method							X		
105I048	Sterilize surgical instruments and equipment using chemical method							X		
105I049	Store surgical instruments and equipment							X		
105I050	Wash drapes							X		
105I051	Clean x-ray cassette							X		

APPLYING FERTILIZERS AND CHEMICALS

		SA	SF	FC	FG	SC	EO	VA	SE	DO
105J001	Evaluate chemicals applied to test plots		X	X	X	X				
105J002	Dispose of chemicals and containers according to manufacturers' specifications			X	X	X				
105J003	Prepare chemical program			X	X	X				
105J004	Calculate application rates			X	X	X				
105J005	Calculate proportions of chemical and carrying agents		X	X	X	X				
105J006	Calibrate spraying equipment		X	X	X	X				
105J007	Prepare fertilizer program		X	X	X	X				
105J008	Map chemical applications		X	X	X	X				
105J009	Formulate fertilizer		X	X	X					
105J010	Test soil		X	X	X					
105J011	Compute fertilizer costs		X	X	X					
105J012	Make fertilizer and lime recommendations		X	X	X					
105J013	Compute chemical costs		X	X	X	X				
105J014	Identify fertilizer injury		X	X	X	X				
105J015	Time fertilizer and chemical applications		X	X	X	X				
105J016	Maintain chemical files		X	X	X	X				

MAINTAINING AND CONSTRUCTING STRUCTURES

		SA	SF	FC	FG	SC	EO	VA	SE	DO
105K001	Plan building construction		X		X					
105K002	Construct concrete floors and foundations			X	X					
105K003	Construct wooden fence				X					
105K004	Construct wire fence				X					
105K005	Construct gates				X					
105K006	Install gates				X					
105K007	Perform maintenance inspection of facilities	X	X	X	X		X			
105K008	Repair roofing and gutters			X	X		X			
105K009	Repair siding			X	X		X			
105K010	Repair doors and entry ways			X	X		X			
105K011	Paint exterior surfaces of buildings			X	X		X			
105K012	Paint interior surfaces of buildings			X	X		X			
105K013	Repair and glaze windows and/or greenhouse lights			X	X		X			
105K014	Service electrical systems of buildings			X	X		X			
105K015	Maintain ventilation systems of buildings			X	X		X			
105K016	Maintain water system			X	X					
105K017	Service livestock feeding equipment	X			X					
105K018	Service livestock watering equipment	X			X					
105K019	Lay out building using transit				X					
105K020	Lay out conservation structures using transit				X					

GROWING CORN, SOYBEANS, SMALL GRAINS OR FORAGE CROP

		SA	SF	FC	FG	SC	EO	VA	SE	DO
105L001	Plan planting schedules			X	X					
105L002	Select seed varieties		X		X		X			
105L003	Select planting date			X	X					
105L004	Prepare seed bed		X		X					
105L005	Select planting method		X		X					
105L006	Plant seeds				X					
105L007	Select pest control program		X	X	X	X				
105L008	Monitor plant growth				X	X				
105L009	Spray crop for pest control			X	X	X				
105L010	Cultivate crop				X					
105L011	Determine number of forage crop cuttings				X					

HARVESTING AND STORING CROPS

		SA	SF	FC	FG	SC	EO	VA	SE	DO
105M001	Harvest beans, corn and small grains				X					
105M002	Dry and store beans, corn and small grains				X		X			
105M003	Harvest forage crops				X					
105M004	Store forage crops				X					
105M005	Monitor moisture content of stored crops	X			X		X			
105M006	Determine marketing strategy	X			X		X			
105M007	Transport crops to market				X					
105M008	Test grain for moisture content	X			X		X			
105M009	Determine weight loss incurred in drying grain						X			
105M010	Determine cost of drying grain						X			
105M011	Identify various types of grain damage						X			
105M012	Identify materials that contaminate grain due to odors						X			
105M013	Identify sources of grain contamination						X			
105M014	Treat grain properly and safely for insect control without lowering quality						X			

		SA	SF	FC	FG	SC	EO	VA	SE	DO
105M015	Identify weeds and weed seeds commonly found in crops						X			
105M016	Operate and read devices for detecting heating of grain in storage						X			
105M017	Use aeration, drying and turning techniques to preserve grain quality						X			

BREEDING, HANDLING AND CARING FOR ANIMALS

		SA	SF	FC	FG	SC	EO	VA	SE	DO
105N001	Inseminate animals artificially				X					
105N002	Pregnancy test animals				X					
105N003	Assist animals in delivery				X			X		
105N004	Assist young to nurse				X			X		
105N005	Castrate animals				X					
105N006	Dehorn animals				X					
105N007	Control building temperature				X			X		
105N008	Control building ventilation				X			X		
105N009	Control building lighting				X			X		
105N010	Restrain animals				X			X		
105N011	Evaluate animals for registry				X			X		
105N012	Mark or tag animals for identification				X			X		
105N013	Bathe animals							X		
105N014	Clean ears							X		
105N015	Clean teeth							X		
105N016	Clip nails							X		
105N017	Comb and brush animals							X		
105N018	Drain anal sacs using the digital pressure method							X		
105N019	Drain anal sacs using the rectal method							X		
105N020	Exercise dogs							X		
105N021	Feed animals using conventional method							X		
105N022	Feed animals using tube method							X		
105N023	Induce bowel movements							X		
105N024	Pluck hair from ear canals							X		

MAINTAINING ANIMAL HEALTH

		SA	SF	FC	FG	SC	EO	VA	SE	DO
105O001	Inspect animals for disease				X					
105O002	Identify ailments in animals	X			X					
105O003	Administer medication				X					
105O004	Control parasites (external or internal)				X					
105O005	Treat wounds				X					
105O006	Disinfect buildings and equipment				X					
105O007	Deworm animals	X			X					

SCOUTING FIELDS FOR WEED, DISEASE, INSECT OR OTHER DAMAGE

		SA	SF	FC	FG	SC	EO	VA	SE	DO
105P001	Scout fields for weeds			X	X	X				
105P002	Map fields for weed location and severity of weed pressure			X	X	X				
105P003	Collect and prepare weed plant samples for laboratory identification			X	X	X				
105P004	Identify weeds		X	X	X	X				
105P005	Scout fields for plant disease damage			X	X	X				
105P006	Collect plant disease specimens			X	X	X				

		SA	SF	FC	FG	SC	EO	VA	SE	DO
105P007	Identify plant diseases		X	X	X	X				
105P008	Scout fields for insect and pest damage			X	X	X				
105P009	Map fields for insect and pest damage location and severity of problem			X	X	X				
105P010	Identify crop insects and pests		X	X	X	X				
105P011	Collect insect specimens for identification			X	X	X				
105P012	Estimate crop loss due to hail or insect damage			X	X	X				
105P013	Take and prepare soil samples for nematode identification			X	X	X				
105P014	Complete plant specimen data form			X	X	X				
105P015	Set out insect traps					X				
105P016	Monitor insect traps					X				
105P017	Estimate and monitor insect populations				X	X				
105P018	Identify visually herbicide injury of plants		X	X	X	X				
105P019	Collect samples of herbicide injured plants			X	X	X				
105P020	Identify visually injury of plants due to herbicide residues in the soil		X	X	X	X				
105P021	Keep records of scouting visits by completing scouting forms			X	X	X				
105P022	Collect plant tissue for nutrient analysis			X	X	X				
105P023	Identify various crops		X	X	X	X				
105P024	Determine crop rotations			X	X	X				
105P025	Estimate crop yields			X	X	X				
105P026	Identify planting problems		X	X	X	X				
105P027	Evaluate soil conditions		X	X	X	X				
105P028	Make recommendatins for fungus control		X	X	X	X				
105P029	Make recommendations for insect control		X	X	X	X				
105P030	Make recommendations for weed control		X	X	X	X				
105P031	Make recommendations for disease control		X	X	X	X				

LOADING, SECURING, TRANSPORTING AND UNLOADING AGRICULTURAL PRODUCTS

		SA	SF	FC	FG	SC	EO	VA	SE	DO
105Q001	Prepare truck			X	X		X		X	
105Q002	Load livestock				X					
105Q003	Restrain livestock				X					
105Q004	Transport livestock				X					
105Q005	Monitor condition of livestock in transit				X					
105Q006	Unload livestock				X					
105Q007	Load grains, such as corn, wheat and soybeans	X			X		X			
105Q008	Unload grains	X			X		X			
105Q009	Load baled crops, such as alfalfa and straw				X					
105Q010	Unload baled crops				X					
105Q011	Load products, such as fertilizer and chemicals			X	X		X			
105Q012	Load farm machinery		X	X	X				X	
105Q013	Unload farm machinery		X	X	X				X	
105Q014	Load livestock and other products						X			
105Q015	Load railroad cars with grain						X			
105Q016	Secure loads and tag for shipping						X		X	
105Q017	Prepare shipping records						X		X	

APPLYING SAFETY PRACTICES

		SA	SF	FC	FG	SC	EO	VA	SE	DO
105R001	Comply with shop and equipment safety rules			X	X		X	X	X	X
105R002	Apply basic emergency first aid techniques	X	X	X	X	X	X	X	X	X
105R003	Complete accident report			X	X		X	X	X	X

		SA	SF	FC	FG	SC	EO	VA	SE	DO
105R004	Inspect work area and equipment for safe working environment			X	X		X	X	X	X
105R005	Use fire extinguisher	X	X	X	X	X	X	X	X	X
105R006	Correct safety hazards			X	X		X	X	X	X
105R007	Demonstrate cardiopulmonary resuscitation (CPR) techniques	X	X	X	X	X	X	X	X	X
105R008	Comply with safety requirements for working around automated systems	X	X	X	X		X	X	X	X
105R009	Participate in safety training program	X	X	X	X	X	X	X	X	X

PERFORMING EXAMINING ROOM AND LABORATORY WORK

		SA	SF	FC	FG	SC	EO	VA	SE	DO
105S001	Analyze fecal samples for worm eggs using the direct smear method							X		
105S002	Analyze fecal samples for worm eggs using standard flotation method							X		
105S003	Analyze fecal samples for worm eggs using centrifuge flotation method							X		
105S004	Change soiled bandages							X		
105S005	Collect urine sample using free catch method							X		
105S006	Collect urine sample using catheterization method							X		
105S007	Collect fecal samples							X		
105S008	Collect semen							X		
105S009	Develop and fix x-ray film							X		
105S010	Examine bacterial cultures							X		
105S011	Perform blood chemistry test							X		
105S012	Perform test for blood coagulability using estimation technique method							X		
105S013	Perform test for blood coagulability using Lee and White method							X		
105S014	Perform test for blood coagulability using one-stage prothrombin method							X		
105S015	Perform test for blood coagulability using prothrombin consumption test method							X		
105S016	Perform test for blood coagulability using partial thromboplastin time method							X		
105S017	Perform test for blood coagulability using direct platelet count method							X		
105S018	Perform test for blood coagulability using indirect platelet count method							X		
105S019	Perform test for chemical composition of urine							X		
105S020	Prepare bacterial cultures (solid agar)							X		
105S021	Prepare blood to be sent to laboratory							X		
105S022	Prepare examination room							X		
105S023	Take and record pulse							X		
105S024	Take and record temperature							X		
105S025	Take blood samples for laboratory tests							X		
105S026	Take x-rays in the clinic							X		
105S027	Check blood for heartworms using microhematocrit method							X		
105S028	Check blood for heartworms using modified Knotts method							X		
105S029	Check blood for heartworms using differentiation method							X		

		SA	SF	FC	FG	SC	EO	VA	SE	DO
105S030	Perform a complete blood count (microhematocrit test)							X		
105S031	Perform a white blood cell count using manual method							X		
105S032	Perform a white blood cell count using kit method							X		
105S033	Perform a red blood cell count using manual method							X		
105S034	Perform a red blood cell count using kit method							X		
105S035	Perform a differential blood cell count							X		
105S036	Fill prescription containers							X		
105S037	Mix chemicals for x-ray processor							X		
105S038	Perform blood smear using cover glass method							X		
105S039	Perform blood smear using slide method							X		
105S040	Examine urine sediment							X		
105S041	Perform skin scraping							X		
105S042	Perform trypsin digestion test using tube test method							X		
105S043	Perform trypsin digestion test using film test method							X		
105S044	Perform vaginal smears							X		

ASSISTING WITH FIRST AID AND SURGERY

		SA	SF	FC	FG	SC	EO	VA	SE	DO
105T001	Administer intramuscular injections under supervision							X		
105T002	Administer intravenous injections under supervision							X		
105T003	Administer oral medications under supervision							X		
105T004	Administer oxygen under supervision							X		
105T005	Administer rectal medications under supervision							X		
105T006	Administer subcutaneous injections under supervision							X		
105T007	Administer surface medications under supervision							X		
105T008	Assist in anesthetizing animals							X		
105T009	Assist in artificial respiration							X		
105T010	Cleanse wounds							X		
105T011	Clip and shave animals' hair from operative areas							X		
105T012	Position and drape animals for surgery							X		
105T013	Hand surgical instruments to veterinarian							X		
105T014	Inventory surgical instruments and materials before and after surgery							X		
105T015	Lay out necessary equipment for surgery							X		
105T016	Prepare animals for blood transfusions							X		
105T017	Prepare chemicals for surgery							X		
105T018	Prepare drugs for surgery							X		
105T019	Prepare postoperative medications as prescribed							X		
105T020	Prepare gown and drape pack							X		
105T021	Prepare surgical glove packs							X		
105T022	Start intravenous fluids							X		
105T023	Stop external bleeding							X		
105T024	Transport accident victim							X		
105T025	Prepare anesthetic agent for injection							X		

		SA	SF	FC	FG	SC	EO	VA	SE	DO
105T026	Assist in postmortem examination							X		
105T027	Prepare standard instrument packs							X		

STARTING UP HIGH-TEMPERATURE, SHORT-TIME PASTEURIZATION

		SA	SF	FC	FG	SC	EO	VA	SE	DO
105U001	Inspect equipment prior to start-up									X
105U002	Adjust equipment for start-up									X
105U003	Prepare data recording equipment									X
105U004	Start up high-temperature, short-time pasteurization process									X

PROCESSING HIGH-TEMPERATURE, SHORT-TIME PASTEURIZATION

		SA	SF	FC	FG	SC	EO	VA	SE	DO
105V001	Monitor pasteurization process									X
105V002	Adjust equipment for high-temperature, short-time processing									X
105V003	Record high-temperature, short-time processing data									X
105V004	Put product into storage tank									X

PERFORMING PRODUCT-TO-PRODUCT CHANGEOVER

		SA	SF	FC	FG	SC	EO	VA	SE	DO
105W001	Prepare lines and valves to bring new product to balance tank									X
105W002	Adjust equipment for product changeover									X
105W003	Complete product changeover process									X

PERFORMING PRODUCT CHANGEOVER REQUIRING FLUSH-OUT

		SA	SF	FC	FG	SC	EO	VA	SE	DO
105X001	Operate lines following established sequence									X
105X002	Set recording data equipment for changeover/ flush-out									X
105X003	Perform flush-out procedures									X
105X004	Inspect equipment for proper operation									X
105X005	Complete product changeover process									X

SHUTTING DOWN HIGH-TEMPERATURE, SHORT-TIME PASTEURIZATION

		SA	SF	FC	FG	SC	EO	VA	SE	DO
105Y001	Prepare high-temperature, short-time for shut-down									X
105Y002	Shut down high-temperature, short-time system									X
105Y003	Inspect recording data equipment									X

CLEANING THE HIGH-TEMPERATURE, SHORT-TIME PASTEURIZER

		SA	SF	FC	FG	SC	EO	VA	SE	DO
105Z001	Inspect and adjust equipment and lines for cleaning									X
105Z002	Perform cleaning procedures									X
105Z003	Inspect equipment									X

Education
For
Employment
Task Lists

Illinois
State Board of
Education

Adult
Vocational and
Technical Education

AGRICULTURAL OCCUPATIONS

1988

HORTICULTURE CLUSTER

Landscape Laborer
Landscape Gardener/Landscaper
Horticultural Worker
Salesperson, Horticulture and Nursery Products
Retail Florist
Greenhouse/Nursery Operator
Salesperson, Lawn and Garden Equipment and Supplies
Gardener/Groundskeeper
Hand Sprayer
*Employability Skills

*Employability skills are a vital component of vocational education programs and should be incorporated into each occupational task list

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NOTE:

The duties and tasks found in these matrices form the basis of instructional content for secondary, postsecondary and adult occupational training programs. Orientation level instruction, usually offered in grades 9, 10, and 11, is a vital component of all vocational education programs and provides a strong foundation and vehicle for transitioning into occupational training programs.

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HORTICULTURE CLUSTER MATRIX

LL = Landscape Laborer
LG = Landscape Gardener/Landscaper
HW = Horticultural Worker
SP = Salesperson, Horticulture and Nursery Products
RF = Retail Florist
GO = Greenhouse/Nursery Operator
SG = Salesperson, Lawn and Garden Equipment and Supplies
GK = Gardener/Groundskeeper
SH = Hand Sprayer

PROPAGATING PLANTS, SEEDS AND CUTTINGS

		LL	LG	HW	SP	RF	GO	SG	GK	SH
160A001	Plan planting schedules		X	X			X		X	
160A002	Clean seed	X	X	X			X			
160A003	Plant seed in flats or growing benches	X	X	X			X			
160A004	Plant seed using plate-type planter			X						
160A005	Plant seed using air-type planter			X						
160A006	Plant seed using precision small-seed-type planter			X			X			
160A007	Plant bulbs	X	X	X			X		X	
160A008	Transplant seedlings using hand transplanter	X	X	X			X		X	
160A009	Transplant seedling fruit trees using hole digger			X						
160A010	Transplant seedlings using wheel-type planter			X			X		X	
160A011	Transplant using a hand transplanter			X						
160A012	Monitor plant growth	X	X	X			X		X	
160A013	Thin nursery stock	X	X	X			X			
160A014	Lay sod	X	X	X					X	
160A015	Maintain sod	X	X	X					X	
160A016	Prepare plants and cuttings for propagation	X	X	X			X			
160A017	Take cuttings	X	X	X			X			
160A018	Stick cuttings	X	X	X			X			
160A019	Label planted specimens	X	X	X			X			
160A020	Plant trees and shrubs	X	X	X			X		X	
160A021	Prepare seed for resting period	X	X	X			X			
160A022	Provide winterization of plants	X	X	X			X		X	
160A023	Select seed varieties		X	X			X		X	
160A024	Transplant cuttings			X			X			
160A025	Apply rooting hormone						X			

PREPARING SOILS AND PLANTING MEDIA

		LL	LG	HW	SP	RF	GO	SG	GK	SH
160B001	Shred planting media			X			X			
160B002	Screen planting media			X			X			
160B003	Mix media materials			X			X			
160B004	Pasteurize prepared media with steam			X			X			
160B005	Pasteurize media with chemicals			X			X			
160B006	Sterilize (pasteurize) soil in field			X						
160B007	Mix fertilizer into media	X	X	X			X			
160B008	Construct open drainage ditch	X	X	X					X	
160B009	Prepare seedbed	X	X	X			X		X	
160B010	Level or smooth planting area	X	X	X			X		X	
160B011	Mark off location of beds	X	X	X			X		X	
160B012	Shape or form beds	X	X	X			X		X	
160B013	Mark off planting spaces with bedwire	X	X	X			X		X	

CONTROLLING THE PLANT ENVIRONMENT

		LL	LG	HW	SP	RF	GO	SG	GK	SH
160C001	Control growth rate by applying retardant	X	X	X	X		X			
160C002	Control light requirements by using shade cloth	X	X	X	X		X			
160C003	Control temperature by setting thermostat			X	X	X	X			
160C004	Cultivate plants	X	X	X	X		X		X	
160C005	Water plants and nursery stock	X	X	X	X	X	X		X	
160C006	Apply mulches	X	X	X	X		X		X	
160C007	Control pests	X	X	X	X	X	X		X	X
160C008	Treat diseased plants, bulbs and corms	X	X	X	X	X	X		X	
160C009	Remove diseased plants	X	X	X	X	X	X		X	
160C010	Plan conservation practices		X		X				X	
160C011	Set time clock for automatic mist propagation system			X			X			
160C012	Aerate compacted soil	X	X	X			X		X	
160C013	Pinch and disbud flowering plants			X		X	X		X	
160C014	Force bulbs			X	X		X			
160C015	Report disease and spray damage	X	X	X	X		X		X	X
160C016	Prune plants, hedges and shrubs								X	
160C017	Thin nursery stock						X			
160C018	Force potted plants to bloom at seasonal times						X			
160C019	Attach care cards to plants					X				
160C020	Condition flowers and plants					X				
160C021	Fill water pics					X				
160C022	Sort seasonal flowers					X				
160C023	Control soil erosion								X	
160C024	Wrap trees								X	
160C025	Brace bareroot trees								X	
160C026	Stake trees								X	
160C027	Treat tree wounds								X	
160C028	Treat tree cavities								X	

APPLYING FERTILIZER AND CHEMICALS

		LL	LG	HW	SP	RF	GO	SG	GK	SH
160D001	Calculate fertilizer and chemical applications	X	X	X	X		X	X	X	X
160D002	Formulate fertilizer	X	X	X	X		X		X	X
160D003	Calibrate fertilizer application equipment	X	X	X	X		X		X	X
160D004	Collect soil sample for fertility test	X	X	X	X		X		X	X
160D005	Test soil		X	X	X		X			
160D006	Make fertilizer and lime recommendations		X	X	X		X	X	X	X
160D007	Assess crop nutrient deficiencies	X	X	X	X		X		X	X
160D008	Treat nutrient deficiencies	X	X	X	X		X		X	X
160D009	Identify chemical injury of plants	X	X	X	X		X		X	X
160D010	Calibrate chemical equipment	X	X	X	X		X		X	X
160D011	Mix chemicals	X	X	X	X		X		X	X
160D012	Time chemical applications	X	X	X	X		X		X	X
160D013	Store chemicals	X	X	X	X		X		X	X
160D014	Perform safety checks on equipment	X	X	X	X		X		X	X
160D015	Transport chemicals	X	X	X	X		X		X	X
160D016	Map chemical applications	X	X	X	X		X			X
160D017	Compute fertilizer costs		X		X		X		X	X
160D018	Apply fertilizer using watering system	X	X	X	X		X		X	X
160D019	Apply fertilizer using auger-type distributor			X			X		X	X
160D020	Apply fertilizer using cyclone-type spreader			X			X		X	X
160D021	Apply fertilizer using drill-type distributor			X			X		X	

	LL	LG	HW	SP	RF	GO	SG	GK	SH
160D022 Apply fertilizer using liquid applicator			X			X			X
160D023 Apply chemicals using boom-type sprayer			X			X			X
160D024 Apply chemicals using fumigant injector			X			X			
160D025 Apply chemicals using air blast sprayer			X						
160D026 Select chemicals for specific problems		X		X		X		X	X
160D027 Compute chemical costs		X		X		X		X	X
160D028 Maintain chemical inventory file		X		X		X	X	X	X
160D029 Determine insurance coverage needs		X				X			
160D030 Administer first aid	X	X	X	X					
160D031 Dispose of chemicals and containers according to manufacturer's specifications				X		X		X	X
160D032 Suggest lawn chemicals for pest control							X	X	X
160D033 Interpret chemical labels						X	X	X	X
160D034 Suggest chemicals applied to gardens							X		
160D035 Compute chemicals needed for lawn/garden							X	X	X
160D036 Suggest chemicals for application to gardens								X	X

HARVESTING PLANTS

	LL	LG	HW	SP	RF	GO	SG	GK	SH
160E001 Dig shrubs and trees	X	X	X			X		X	
160E002 Ball and burlap shrubs and trees	X	X	X			X			
160E003 Grade plants		X		X		X			
160E004 Label harvested plants by common names	X	X	X	X		X			
160E005 Harvest seeds	X		X			X		X	
160E006 Harvest bareroot stock			X			X		X	
160E007 Dig bulbs and corms			X			X		X	
160E008 Clean and size harvested bulbs and corms			X			X			
160E009 Dry harvested bulbs and corms			X			X			
160E010 Cut flowers and ferns			X			X		X	
160E011 Count, grade and bunch flowers and ferns			X	X		X			
160E012 Prepare and place cut flowers in water or preservative			X			X			
160E013 Remove saleable plants from beds			X			X			
160E014 Remove bed wire from harvested areas			X			X			
160E015 Mark trees to be harvested			X			X			

HARVESTING FRUIT AND VEGETABLE CROPS

	LL	LG	HW	SP	RF	GO	SG	GK	SH
160F001 Pick small fruits			X						
160F002 Pick tree fruits			X						
160F003 Pick bush fruits			X						
160F004 Pick bush vegetables			X						
160F005 Pick vine vegetables			X						
160F006 Deliver baskets or boxes to grader or market			X						
160F007 Load pallets on truck or trailor			X						

GRADING AND PACKAGING FRUIT AND VEGETABLE CROPS

	LL	LG	HW	SP	RF	GO	SG	GK	SH
160G001 Adjust a grader			X						
160G002 Wash and grade crops			X						
160G003 Cool crops using a cooler room			X						
160G004 Set up grader			X						

MAINTAINING AND PROTECTING FRUIT TREES

	LL	LG	HW	SP	RF	GO	SG	GK	SH
160H001 Maintain a mechanical topper			X						
160H002 Prune trees for frame			X					X	
160H003 Perform annual pruning for shape and fruit set			X					X	
160H004 Top fruit trees using mechanical topper			X					X	

STORING, SHIPPING AND TAKING INVENTORY

	LL	LG	HW	SP	RF	GO	SG	GK	SH
160I001 Bundle plants	X	X	X	X	X	X			
160I002 Wrap plants	X	X	X	X	X	X			
160I003 Pack plants	X	X	X	X	X	X			
160I004 Bunch plants	X	X	X	X		X			
160I005 Pack shrubs	X	X	X	X		X			
160I006 Care for overwintering of container grown plants	X	X	X			X			
160I007 Check received merchandise against invoice listings	X	X	X	X	X	X	X		X
160I008 Keep current inventory of products for sale	X	X	X	X	X	X	X		X
160I009 Load trucks and trailers for drop shipment	X	X	X			X	X		X
160I010 Transport products	X	X	X		X	X			X
160I011 Package orders for shipment	X	X	X	X	X	X	X		
160I012 Store received supplies	X	X	X		X	X	X		X
160I013 Write sales receipt	X			X					
160I014 Assemble shipping cartons			X		X	X			
160I015 Load and unload bagged and bulk materials	X		X		X	X	X		X
160I016 Store floral and foliage plants in cold storage units			X		X	X			

DESIGNING/INSTALLING LANDSCAPES

	LL	LG	HW	SP	RF	GO	SG	GK	SH
160J001 Obtain plants	X	X						X	
160J002 Follow landscape plan in installing plants	X	X	X					X	
160J003 Plant trees	X	X	X					X	
160J004 Plant shrubs	X	X	X					X	
160J005 Plant ground covers	X	X	X					X	
160J006 Seed lawns	X	X						X	
160J007 Select plants		X		X				X	
160J008 Design corner planting/paper and pencil		X		X					
160J009 Design corner planting/landscape software		X		X					
160J010 Design line planting/paper and pencil		X		X					
160J011 Design line planting/landscape software		X		X					
160J012 Design foundation planting/paper and pencil		X		X					
160J013 Design foundation planting/landscape software		X		X					
160J014 Design landscape plan/paper and pencil		X		X					
160J015 Design landscape plan/landscape software		X		X					
160J016 Construct landscape model		X		X					
160J017 Price landscape design		X		X					
160J018 Read landscape plan	X	X		X				X	
160J019 Set landscaping stones	X	X	X					X	

MAINTAINING AND IMPROVING GROUNDS

	LL	LG	HW	SP	RF	GO	SG	GK	SH
160K001 Aerify turf			X					X	
160K002 Verticut turf			X					X	
160K003 Apply topdressing to turf			X					X	

		LL	LG	HW	SP	RF	GO	SG	GK	SH
160K004	Overseed turf			X					X	
160K005	Mow grounds			X					X	
160K006	Trim hedges			X					X	
160K007	Trim lawn edges			X					X	
160K008	Irrigate lawns			X					X	
160K009	Prune trees			X					X	
160K010	Prune plants, hedges and shrubs			X					X	
160K011	Sod worn spots in lawn			X					X	
160K012	Clean ornamental pools			X					X	
160K013	Clean grounds of litter and leaves								X	
160K014	Dispose of prunings								X	
160K015	Maintain pools and fountains								X	
160K016	Apply salt to icey sidewalks and drives								X	

SERVICING AND MAINTAINING EQUIPMENT AND FACILITIES

		LL	LG	HW	SP	RF	GO	SG	GK	SH
160L001	Service tillage preparation equipment	X	X	X			X		X	
160L002	Service planting equipment	X	X	X			X		X	
160L003	Service cultivating equipment (clean, lubricate and adjust chain drive)	X	X	X			X		X	
160L004	Service harvesting equipment	X	X	X			X			
160L005	Service conveyance systems	X	X	X					X	X
160L006	Service tires	X	X	X			X		X	X
160L007	Service utility tractor	X	X	X			X		X	X
160L008	Service business vehicle	X	X	X	X	X	X		X	X
160L009	Service small four-cycle and two-cycle engines	X	X	X	X		X		X	X
160L010	Maintain hand tools	X	X	X	X	X	X	X	X	X
160L011	Service sprinkler system by replacing valves and gaskets	X	X	X	X		X		X	
160L012	Clean dusters	X	X	X					X	X
160L013	Replace greenhouse fan	X	X	X			X			
160L014	Clean sprayers	X	X	X			X		X	X
160L015	Install sprinkler heads, nozzles and other irrigation equipment	X	X	X			X		X	
160L016	Clean work and delivery areas	X	X	X	X	X	X		X	X
160L017	Service electrical outlets and extensions	X			X	X	X			
160L018	Lubricate and adjust power equipment	X	X	X			X		X	X
160L019	Service ventilation system	X	X	X			X			
160L020	Troubleshoot electrical wiring and equipment	X	X	X		X	X		X	X
160L021	Troubleshoot equipment failure	X	X	X			X		X	X
160L022	Calibrate equipment	X	X	X	X		X	X	X	X
160L023	Maintain service records	X	X	X	X		X	X	X	X
160L024	Order equipment parts		X	X	X	X	X		X	
160L025	Service electrical controls			X		X	X		X	
160L026	Perform routine maintenance and repairs			X	X	X	X	X	X	X
160L027	Service electric motors			X		X	X		X	
160L028	Prepare equipment for off-season storage	X	X	X			X		X	X
160L029	Establish service records				X		X		X	
160L030	Clean and fumigate storage facility	X		X	X	X	X	X		X
160L031	Assemble mowers for display							X		
160L032	Assemble seeding equipment for display							X		
160L033	Assemble sprayers for display							X		
160L034	Assemble spreaders for display							X		
160L035	Assemble snow blowers for display							X		
160L036	Demonstrate use of spreaders							X		

		LL	LG	HW	SP	RF	GO	SG	GK	SH
160L037	Demonstrate use of mowers							X		
160L038	Demonstrate use of sprayers							X		
160L039	Demonstrate use of seeding equipment							X		
160L040	Demonstrate use of snow blowers							X		
160L041	Suggest cultural practices to control lawn and garden pests						X	X	X	X
160L042	Clean and sanitize cold storage facility					X				
160L043	Fumigate cold storage facility					X				
160L044	Assemble applicating pumps									X
160L045	Assemble boom-type chemical equipment									X
160L046	Change nozzles on applicators									X
160L047	Clean clogged screens									X
160L048	Paint applicating equipment									X
160L049	Replace hose clamps									X
160L050	Replace liquid hoses									X

PERFORMING GENERAL OFFICE WORK

		LL	LG	HW	SP	RF	GO	SG	GK	SH
160M001	Process incoming telephone calls	X	X	X	X	X	X	X		X
160M002	Process outgoing telephone calls	X	X	X	X	X	X	X		X
160M003	Clean work area	X	X	X	X	X	X	X		X
160M004	File materials		X			X	X	X		X
160M005	Type reports		X		X	X	X	X		X
160M006	Process incoming mail		X		X	X	X	X		
160M007	Process outgoing mail		X		X	X	X	X		
160M008	Maintain mailing list		X		X	X	X	X		
160M009	Schedule appointments and meetings		X		X	X	X			X
160M010	Repair minor malfunctions of office equipment		X		X	X	X	X		
160M011	Duplicate materials		X		X	X	X	X		
160M012	Establish filing system		X		X	X	X			
160M013	Establish file index		X		X	X	X			
160M014	Prepare bank deposits		X		X	X	X	X		
160M015	Reconcile bank statements		X			X	X			
160M016	Write field reports		X		X		X			X
160M017	Order supplies and equipment		X	X		X	X			X
160M018	Establish a payroll system		X							
160M019	Prepare payroll		X			X	X			

PERFORMING SALES DUTIES

		LL	LG	HW	SP	RF	GO	SG	GK	SH
160N001	Conduct sale		X		X	X	X	X		
160N002	Close sale		X		X	X	X	X		
160N003	Plan territory management		X		X	X	X			X
160N004	Complete business forms		X		X	X	X	X		X
160N005	Determine customer needs		X		X	X	X	X		X
160N006	Conduct sales meetings		X		X	X	X	X		
160N007	Identify potential buyers		X		X	X	X	X		X
160N008	Provide customers with technical assistance		X		X	X	X	X		X
160N009	Recommend plant maintenance procedures		X		X	X	X			X
160N010	Prepare sales options		X		X	X	X	X		
160N011	Secure consumer approval for sales option		X		X	X	X	X		
160N012	Implement approved sales option		X		X	X	X	X		X
160N013	Evaluate sales process		X		X	X	X			
160N014	Plan marketing strategy		X		X	X	X			
160N015	Develop promotional aids		X		X	X	X	X		

		LL	LG	HW	SP	RF	GO	SG	GK	SH
160N016	Prepare plants for sale		X	X	X	X	X			
160N017	Prepare floral arrangements			X	X	X	X			
160N018	Process telephone orders		X	X	X	X	X	X		
160N019	Prepare invoices		X	X		X	X			X
160N020	Assist customer in locating merchandise		X	X	X	X	X	X		
160N021	Inform customer of warranty or guarantee specifications		X		X					
160N022	Compute sales tax		X		X	X	X	X		X
160N023	Complete sales slip		X		X	X	X	X		X
160N024	Inform customer of guarantee specifications					X	X	X		X
160N025	Identify plants					X	X	X	X	
160N026	Identify plant diseases					X	X	X	X	X
160N027	Identify common lawn and garden insects						X	X	X	X
160N028	Identify garden crops							X	X	X
160N029	Suggest procedures for fungus control					X	X	X	X	X
160N030	Suggest procedures for insect control					X	X	X	X	X
160N031	Suggest procedures for weed control						X	X	X	X
160N032	Suggest procedures for disease control					X	X	X	X	X

PERFORMING SALES-RELATED DUTIES

		LL	LG	HW	SP	RF	GO	SG	GK	SH
1600001	Open store or department				X	X	X	X		
1600002	Process cash sales transaction				X	X	X	X		X
1600003	Process debit card sales transaction				X	X	X	X		X
1600004	Process charge card sales transaction				X	X	X	X		
1600005	Package customer purchase				X	X	X	X		
1600006	Process customer complaint				X	X	X	X		X
1600007	Close out cash register				X	X	X	X		
1600008	Close store or department				X	X	X	X		
1600009	Process customer returned sales				X	X	X	X		
1600010	Greet and meet people		X		X	X	X	X		X
1600011	Maintain customer file system		X		X	X	X	X		X
1600012	Interpret market information		X			X	X	X		X
1600013	Label and price products		X		X	X	X	X		
1600014	Prepare advertisements		X		X	X	X	X		
1600015	Code and date merchandise		X			X	X	X		
1600016	Rotate horticulture and nursery products		X		X	X	X	X		
1600017	Arrange delivery of merchandise					X	X	X		
1600018	Order supplies and stock					X	X	X		
1600019	Process incoming order					X	X	X		
1600020	Return unuseable merchandise					X	X	X		
1600021	Update prices on merchandise					X	X	X		
1600022	Stock merchandise displays					X	X	X		
1600023	Store merchandise in storage area					X	X	X		
1600024	Read lawn and pest management calendar						X	X		X
1600025	Design and letter show cards					X				
1600026	Build counter and table-top displays					X				
1600027	Stock shelves, gondolas and counter tops with merchandise					X				
1600028	Prepare merchandise orders for wholesalers					X				
1600029	Gift wrap purchases					X				
1600030	Wire flowers by telephone					X				

MAINTAINING AND CONSTRUCTING STRUCTURES

		LL	LG	HW	SP	RF	GO	SG	GK	SH
160P001	Service electrical systems of buildings						X		X	
160P002	Paint exterior surfaces of buildings	X	X	X			X		X	
160P003	Paint interior surfaces	X	X	X			X		X	
160P004	Repair and glaze windows and greenhouse lights	X	X	X			X		X	
160P005	Construct hot beds			X			X			
160P006	Construct cold frames			X			X		X	
160P007	Perform maintenance inspection of facilities	X	X	X			X		X	
160P008	Repair roofing and gutters	X	X	X			X			
160P009	Repair siding	X	X	X			X			
160P010	Repair doors and entry ways	X	X	X			X			
160P011	Maintain ventilation systems of buildings			X			X			
160P012	Replace plastic covering on greenhouse structures			X			X			
160P013	Repair wooden portions of greenhouse superstructure			X			X			
160P014	Replace damaged sections of structures and plastic coverings			X			X			
160P015	Replace damaged support wires for black cloth and plastic coverings			X						
160P016	Repair wooden greenhouse benches			X			X			
160P017	Construct a packing shed			X						
160P018	Replace damaged support wires for saran and black cloth and plastic coverings						X			
160P019	Construct display shelves					X	X	X		
160P020	Arrange facilities for seasonal changes					X	X	X		

MANAGING THE BUSINESS

		LL	LG	HW	SP	RF	GO	SG	GK	SH
160Q001	Maintain business records		X		X	X	X	X		
160Q002	Prepare financial statements		X			X	X			
160Q003	Interpret financial statements		X			X	X			
160Q004	Complete business loan application process		X			X	X			
160Q005	Develop credit plan		X		X	X	X			
160Q006	Prepare budget		X			X	X			
160Q007	Prepare tax statements		X			X	X			
160Q008	Prepare depreciation schedule		X			X	X			
160Q009	Calculate net worth		X			X	X			
160Q010	Develop land use program		X				X			
160Q011	Supervise agriculture workers		X				X		X	
160Q012	Orient new employees		X			X	X		X	
160Q013	Plan work schedules		X		X	X	X	X	X	
160Q014	Determine labor needs		X		X	X	X		X	
160Q015	Train workers using demonstration-performance method		X		X	X	X		X	
160Q016	Evaluate employee performance		X			X	X		X	
160Q017	Prepare reports		X		X	X	X		X	
160Q018	Develop business agreements		X			X	X			
160Q019	Develop marketing plan		X		X	X	X			
160Q020	Maintain inventory records				X	X	X	X		
160Q021	Select computer software for records and reports	X			X	X	X			
160Q022	Select computer software for horticulture applications	X			X	X	X			
160Q023	Use computerized network on agricultural marketing and management		X		X	X	X			

		LL	LG	HW	SP	RF	GO	SG	GK	SH
160Q024	Prepare periodic reports and financial statements using computer system		X		X	X	X	X		
160Q025	Input accounting entries in computerized bookkeeping system		X		X	X	X	X		
160Q026	Establish computerized inventory control system		X			X	X	X		
160Q027	Analyze financial statements using financial ratios		X			X	X			
160Q028	Select bookkeeping/accounting system		X			X	X			
160Q029	Conduct periodic inspection of merchandise					X	X	X		
160Q030	Conduct inventory of merchandise					X	X	X		

APPLYING SAFETY PRACTICES

		LL	LG	HW	SP	RF	GO	SG	GK	SH
160R001	Apply basic emergency first aid techniques	X	X	X	X	X	X	X	X	X
160R002	Use fire extinguisher	X	X	X	X	X	X	X	X	X
160R003	Administer cardiopulmonary resuscitation (CPR)	X	X	X	X	X	X	X	X	X
160R004	Comply with safety requirements for working around automated equipment	X	X	X	X	X	X	X	X	X
160R005	Participate in safety training programs	X	X	X	X	X	X	X	X	X
160R006	Check working condition of respirator									X
160R007	Comply with laws regarding notices of chemical application									X
160R008	Obtain and renew chemical application license									X
160R009	Determine safe weather conditions for chemical application								X	X
160R010	Clean up chemical spills								X	X
160R011	Recognize pesticide poisoning symptoms								X	X
160R012	Inspect protective clothing before using									X

DESIGNING ARRANGEMENTS

		LL	LG	HW	SP	RF	GO	SG	GK	SH
160S001	Design artifical flower and foliage arrangements					X				
160S002	Design casket blankets					X				
160S003	Design circle arrangements					X				
160S004	Design corsages					X				
160S005	Design dish gardens					X				
160S006	Design dried arrangements					X				
160S007	Design funeral baskets					X				
160S008	Design funeral sprays					X				
160S009	Design funeral vases					X				
160S010	Design funeral wreaths					X				
160S011	Design novelty arrangements					X				
160S012	Design oval arrangements					X				
160S013	Design planters					X				
160S014	Design right angle shaped arrangements					X				
160S015	Design spiral shaped arrangements					X				
160S016	Design symmetrically balanced triangle arrangements					X				
160S017	Design terrariums					X				
160S018	Design asymmetrically balanced triangle arrangements					X				
160S019	Design vertically shaped arrangements					X				
160S020	Dress potted plants					X				
160S021	Make bows					X				
160S022	Set up and dismantle wedding decorations					X				
160S023	Prepare special occasion decorations					X				

		LL	LG	HW	SP	RF	GO	SG	GK	SH
160S024	Spray tint both dried and live floral products					X				
160S025	Wire flowers using piercing method					X				
160S026	Wire flowers using hairpin method					X				
160S027	Wire flowers using hook-wire method					X				
160S028	Make silk flowers					X				
160S029	Cut florette for funeral baskets and filler					X				
160S030	Make nets or fans					X				
160S031	Make fruit baskets					X				
160S032	Service and direct wedding arrangements					X				
160S033	Prepare designed ribbon using glue and glitter					X				
160S034	Design bud vases					X				
160S035	Prepare sand painting or sculpture					X				
160S036	Make silk flower and foliage arrangement					X				
160S037	Make material for corsages					X				

Education For Employment Task Lists

Illinois State Board of Education

Adult Vocational and Technical Education

AGRICULTURAL OCCUPATIONS

1988

AGRICULTURAL POWER AND MACHINERY CLUSTER

Farm Equipment Mechanic

*Employability Skills

*Employability skills are a vital component of vocational education programs and should be incorporated into each occupational task list

NOTE:

The duties and tasks found in these matrices form the basis of instructional content for secondary, postsecondary and adult occupational training programs. Orientation level instruction, usually offered in grades 9, 10, and 11, is a vital component of all vocational education programs and provides a strong foundation and vehicle for transitioning into occupational training programs.

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AGRICULTURAL POWER AND MACHINERY CLUSTER MATRIX

FEM = Farm Equipment Mechanic

ASSEMBLING EQUIPMENT

		FEM
180A001	Assemble primary tillage equipment	X
180A002	Assemble secondary tillage equipment	X
180A003	Assemble planting equipment	X
180A004	Assemble cultivation and weed control equipment	X
180A005	Assemble fertilizing equipment	X
180A006	Assemble corn harvesting equipment	X
180A007	Assemble forage harvesting equipment	X
180A008	Assemble grain harvesting equipment	X
180A009	Assemble hay harvesting equipment	X
180A010	Assemble crop processing equipment	X

PERFORMING ADMINISTRATIVE FUNCTIONS

		FEM
180B001	Assign jobs	X
180B002	Complete initial service data on invoice	X
180B003	Complete service invoice	X
180B004	Complete work order	X
180B005	Prepare written cost estimate of repair work for customer	X
180B006	Interview customer to obtain description of problem	X
180B007	Obtain in-stock repair parts through catalog search	X
180B008	Complete requisition to order not-in-stock repair parts	X
180B009	Prepare warranty claim	X
180B010	Establish and maintain service record	X
180B011	Plan work schedule	X
180B012	Determine labor needed	X
180B013	Prepare for peak work loads	X
180B014	Maintain quality control records	X
180B015	Maintain work area	X
180B016	Write sales receipt	X
180B017	Enter service order into computerized inventory system	X
180B018	Locate and identify parts using micro-fiche system	X
180B019	Report problems to supervisor	X
180B020	Complete job status report	X
180B021	Maintain labor records	X

SERVICING BEARINGS AND SEALS

		FEM
180C001	Realign shaft and bearings	X
180C002	Replace bearings	X
180C003	Replace dynamic seals	X
180C004	Replace plain bearings (bushings)	X
180C005	Replace static seals	X
180C006	Troubleshoot bearings	X

SERVICING POWER TRANSFER SYSTEMS

		FEM
180D001	Adjust chains	X
180D002	Adjust belts	X
180D003	Repair chains	X
180D004	Repair variable speed drives	X
180D005	Align chain and sprocket	X
180D006	Clean and lubricate chain	X

		FEM
180D007	Clean sprocket	X
180D008	Install chain idler	X
180D009	Replace belt sheave	X
180D010	Replace V-belts	X
180D011	Replace flat pickup drive belt	X
180D012	Replace sprocket	X
180D013	Replace elevator paddles	X
180D014	Replace speed control	X
180D015	Replace hydrostatic drive charge pressure control valve	X
180D016	Replace hydrostatic drive charge pump	X
180D017	Replace hydrostatic drive directional control valve	X
180D018	Replace hydrostatic drive high pressure relief valve	X
180D019	Grease gearbox	X
180D020	Install oil gaskets	X
180D021	Install oil seals	X
180D022	Replace clutch friction disk	X
180D023	Replace countershaft	X
180D024	Replace transmission case	X
180D025	Replace planetary gear	X
180D026	Replace shaft	X
180D027	Replace synchronizing unit	X
180D028	Replace universal joint	X
180D029	Adjust clutch linkage	X
180D030	Replace gear drives	X

SERVICING HYDRAULICS

		FEM
180E001	Adjust pressure relief valve	X
180E002	Bleed air from hydraulic system	X
180E003	Change hydraulic filter	X
180E004	Flush hydraulic system	X
180E005	Drain and refill hydraulic system	X
180E006	Hone hydraulic cylinder walls	X
180E007	Replace check valve	X
180E008	Replace hydraulic hoses	X
180E009	Replace hydraulic cylinders	X
180E010	Replace hydraulic fittings	X
180E011	Replace hydraulic lines	X
180E012	Replace hydraulic piston	X
180E013	Replace packing	X
180E014	Repair hydraulic motors	X
180E015	Replace hydraulic pumps	X
180E016	Service hydraulic valves	X
180E017	Repair hydraulic pumps	X
180E018	Troubleshoot hydraulic actuator	X
180E019	Replace hydraulic actuator	X
180E020	Troubleshoot pressure regulators	X
180E021	Inspect pressure control valves	X
180E022	Null hydraulic servo valve	X
180E023	Test accumulator charge	X
180E024	Recharge accumulator	X
180E025	Replace defective accumulator	X
180E026	Troubleshoot heat exchanger	X
180E027	Measure pressure within hydraulic system	X
180E028	Measure flow within hydraulic system	X

		FEM
180E029	Troubleshoot hydraulic systems	X
180E030	Interpret control diagrams for hydraulic systems	X
180E031	Diagnose malfunctions of hydraulic systems using test and measurement equipment	X
180E032	Connect hydraulic components to machines	X

SERVICING BRAKE SYSTEMS

		FEM
180F001	Adjust brakes	X
180F002	Replace brake pads	X
180F003	Repair brake master cylinder	X
180F004	Replace brake master cylinder	X
180F005	Install brakes	X

SERVICING CARBURETION AND FUEL SYSTEMS

		FEM
180G001	Bleed diesel fuel system	X
180G002	Clean diesel fuel injector	X
180G003	Rebuild carburetor	X
180G004	Replace diesel injection pump	X
180G005	Replace diesel injector nozzles	X
180G006	Replace fuel pump	X
180G007	Replace turbocharger	X
180G008	Check and adjust timing on diesel fuel injection pump	X
180G009	Adjust carburetor	X
180G010	Install carburetor	X

SERVICING COOLING AND LUBRICATION SYSTEMS

		FEM
180H001	Seal leak in cooling system	X
180H002	Replace cooling system thermostat	X
180H003	Replace oil cooler	X
180H004	Replace oil filter	X
180H005	Replace oil pressure gauge	X
180H006	Replace oil pump	X
180H007	Replace radiator	X
180H008	Replace water pump	X
180H009	Rebuild oil pump	X
180H010	Flush cooling system	X
180H011	Prepare engine for off-season storage	X
180H012	Service lubrication system	X
180H013	Service cooling system	X

SERVICING ELECTRICAL SYSTEMS

		FEM
180I001	Adjust voltage regulator	X
180I002	Replace alternator regulator	X
180I003	Replace amperage meter	X
180I004	Replace diode	X
180I005	Replace generator brushes	X
180I006	Replace alternator heat sink	X
180I007	Polish commutator	X
180I008	Rebuild distributor	X
180I009	Rebuild starter	X
180I010	Replace alternator bearings	X

		FEM
180I011	Replace distributor points and condenser	X
180I012	Replace ignition coil	X
180I013	Replace ignition distributor	X
180I014	Replace starter armature shaft bushing	X
180I015	Replace ignition wires	X
180I016	Replace starter brushes	X
180I017	Replace starter drive assembly	X
180I018	Replace starter motor	X
180I019	Replace starter motor solenoid	X
180I020	Set breaker point dwell	X
180I021	Set ignition timing	X
180I022	Troubleshoot electrical system	X
180I023	Activate and charge battery	X
180I024	Clean battery terminals	X
180I025	Change battery	X
180I026	Service fuse box	X
180I027	Gap plugs and points	X
180I028	Change plugs and points	X
180I029	Service electrical system	X
180I030	Service equipment monitoring unit	X

SERVICING INTERNAL COMBUSTION ENGINES

		FEM
180J001	Replace crankshaft	X
180J002	Replace main bearings	X
180J003	Replace rod bearings	X
180J004	Replace timing chain/gears	X
180J005	Replace camshaft and camshaft bearings	X
180J006	Replace dry sleeves	X
180J007	Replace piston rings	X
180J008	Replace rocker arms/shaft	X
180J009	Replace wet sleeves	X
180J010	Replace piston	X
180J011	Adjust valves	X
180J012	Replace engine block	X
180J013	Replace cylinder head	X
180J014	Repair piston assembly	X
180J015	Replace cylinder head gasket	X
180J016	Recondition valves and valve seats	X
180J017	Remove cylinder ridge	X
180J018	Hone and/or deglaze cylinder	X
180J019	Repair exhaust system	X
180J020	Replace exhaust system	X

SERVICING TIRES

		FEM
180K001	Demount large implement tire	X
180K002	Demount small implement tire with machine	X
180K003	Demount small implement tire without machine	X
180K004	Demount tire with split rim	X
180K005	Mount tire	X
180K006	Repair tube puncture	X
180K007	Repair tubeless tire puncture	X
180K008	Service tire with fluid	X

SERVICING MECHANICAL COMPONENTS OF BALERS

		FEM
180L001	Replace round baler compression roll spring	X
180L002	Replace round baler floor and floor channel	X
180L003	Replace round baler rollers	X
180L004	Adjust round baler knife arm	X
180L005	Adjust twine baler needles	X
180L006	Adjust twine baler slip clutches	X
180L007	Adjust twine baler tucker fingers	X
180L008	Adjust twine baler disc	X
180L009	Adjust twine baler bale care tension	X
180L010	Replace twine baler bill hook	X
180L011	Replace hay dog springs	X
180L012	Replace twine baler pin in bill hook pinion	X
180L013	Replace twine baler finger rod	X
180L014	Replace twine baler knife	X
180L015	Sharpen twine baler knife cutting edge	X
180L016	Time feeder	X
180L017	Time plunger	X
180L018	Replace round baler belts	X

SERVICING MECHANICAL COMPONENTS OF COMBINES AND HARVESTERS

		FEM
180M001	Stabilize concave leveling mechanism	X
180M002	Replace concave	X
180M003	Replace cutterbar on combine	X
180M004	Replace feeder conveyor	X
180M005	Replace gathering chains	X
180M006	Interchange combine grain and corn head	X
180M007	Replace cylinder rotor on combine	X
180M008	Replace bars on snapping plates on combine	X
180M009	Replace straw walkers	X
180M010	Replace threshing cylinder	X
180M011	Replace threshing fans	X
180M012	Adjust corn harvester cylinder to concave	X
180M013	Adjust cylinder cut-off bar	X
180M014	Adjust drag chains and links	X
180M015	Adjust elevator chains	X
180M016	Adjust floating shoes	X
180M017	Adjust reel speed	X
180M018	Adjust sieves	X
180M019	Adjust snapping rolls	X
180M020	Adjust stripper plates	X
180M021	Adjust table balance springs	X
180M022	Lubricate feeder chain	X
180M023	Adjust slip clutches	X
180M024	Replace snapping rolls	X
180M025	Time gathering chains	X
180M026	Replace cutterbar on mower-conditioner/windrower	X
180M027	Replace guard on mower-conditioner/windrower	X
180M028	Replace hay conditioner universal joints	X
180M029	Replace mower knife sections	X
180M030	Replace mower ledger plates	X
180M031	Replace mower wear plates	X

SERVICING MECHANICAL COMPONENTS OF PLANTERS

		FEM
180N001	Replace disc furrow covers	X
180N002	Adjust furrow covers	X
180N003	Adjust hitch	X
180N004	Adjust row marker	X
180N005	Adjust furrow opener	X
180N006	Replace plate type sprockets	X
180N007	Calibrate seed placement rate	X
180N008	Calibrate pressurized air seed metering system	X
180N009	Calibrate finger-pickup seed metering system	X
180N010	Calibrate seed-plate metering system	X
180N011	Adjust for desired depth of seed placement	X
180N012	Adjust attachments	X
180N013	Install monitor assembly	X
180N014	Service and troubleshoot monitor assembly	X
180N015	Troubleshoot field problem	X

PERFORMING OXY-FUEL (OAW) WELDING

		FEM
1800001	Select oxy-fuel welding gas and filler metal according to job	X
1800002	Change cylinders and adjust oxy-fuel manifold	X
1800003	Set up portable oxy-fuel welding equipment	X
1800004	Perform minor maintenance on oxy-fuel welding equipment	X
1800005	Weld 1/8" mild steel in flat position	X
1800006	Weld 1/8" mild steel in horizontal position	X
1800007	Weld 1/8" mild steel in vertical position	X
1800008	Weld 1/8" mild steel in overhead position	X
1800009	Braze ferrous metal	X
1800010	Braze non-ferrous metal	X
1800011	Heat and bend metal to specifications	X
1800012	Heat metal parts to assist in removal	X
1800013	Build up surfaces	X
1800014	Hard face surfaces	X

PERFORMING THERMAL CUTTING OPERATIONS

		FEM
180P001	Set up portable oxy-fuel cutting equipment	X
180P002	Cut steel by hand using oxy-fuel cutting equipment	X
180P003	Cut and pierce metal with shielded metal arc welding equipment	X

PERFORMING SHIELDED METAL ARC WELDING (SMAW)

		FEM
180Q001	Select shielded metal arc welding equipment and electrodes according to job	X
180Q002	Set up shielded metal arc welding equipment	X
180Q003	Perform minor maintenance on shielded metal arc welding equipment	X
180Q004	Weld 3/16" mild steel in flat position	X
180Q005	Weld 3/16" mild steel in horizontal position	X
180Q006	Weld 3/16" mild steel in vertical position	X

		FEM
180Q007	Weld 3/16" mild steel in overhead position	X
180Q008	Weld single vee-groove butt joint on 3/8" steel plate	X

PERFORMING GAS METAL ARC WELDING (GMAW)

		FEM
180R001	Select gas metal arc welding equipment, filler metal and gases according to job	X
180R002	Set up gas metal arc welding equipment	X
180R003	Perform minor maintenance on gas metal arc welding equipment	X
180R004	Weld 3/16" mild steel in flat position	X
180R005	Weld 3/16" mild steel in horizontal position	X
180R006	Weld 3/16" mild steel in vertical position	X
180R007	Weld 3/16" mild steel in overhead position	X
180R008	Weld single vee-groove butt joint on 3/8" steel plate	X

APPLYING SAFETY PRACTICES

		FEM
180S001	Comply with shop and equipment safety rules	X
180S002	Apply basic emergency first aid techniques	X
180S003	Complete accident reports	X
180S004	Inspect workplace for safe working environment	X
180S005	Use fire extinguisher	X
180S006	Participate in shop safety committees	X
180S007	Correct safety hazards	X
180S008	Demonstrate cardiopulmonary resuscitation (CPR) techniques	X
180S009	Participate in safety training programs	X

Education For Employment Task Lists

Illinois State Board of Education

Adult Vocational and Technical Education

AGRICULTURAL OCCUPATIONS

1988

AGRICULTURAL RESOURCES CLUSTER

Park Aide

*Employability Skills

*Employability skills are a vital component of vocational education programs and should be incorporated into each occupational task list

NOTE:

The duties and tasks found in these matrices form the basis of instructional content for secondary, postsecondary and adult occupational training programs. Orientation level instruction, usually offered in grades 9, 10, and 11, is a vital component of all vocational education programs and provides a strong foundation and vehicle fcr transitioning into occupational training programs.

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PA = Park Aide

MANAGING THE RECREATIONAL FACILITY

		PA
190A001	Complete weekly receipts	X
190A002	Complete invoices	X
190A003	Requisition materials, supplies and services	X
190A004	Maintain inventory records	X
190A005	Maintain equipment maintenance records	X
190A006	Follow work schedule	X
190A007	Contribute to annual park management update	X
190A008	Identify specific recreational program needs for visitors	X
190A009	Complete business forms	X
190A010	Communicate orally with visitors	X
190A011	Assist in assessing and collecting fees and charges	X
190A012	Determine land-use capability	X
190A013	Assist in development of resource conservation plans	X
190A014	Interpret maps, charts and aerial photographs	X

APPLYING LAWS, REGULATIONS AND POLICIES

		PA
190B001	Interpret visitor disciplinary processes	X
190B002	Interpret game and wildlife laws	X
190B003	Interpret stream, lake, pond and groundwater laws	X
190B004	Patrol park areas	X
190B005	Request visitors to voluntarily comply with rules and regulations	X
190B006	Process visitor complaints	X
190B007	Report violations to appropriate authority	X
190B008	Interpret Environmental Protection Agency (EPA) regulations	X
190B009	Maintain permits, certificates and licenses	X
190B010	Maintain crowd control	X
190B011	Direct vehicular and pedestrian traffic	X
190B012	Greet and meet people	X
190B013	Prepare service work order	X
190B014	Estimate cost of service work	X
190B015	Post facility directions and warnings	X
190B016	Post facility rules and regulations	X
190B017	Monitor camping and swimming areas	X
190B018	Maintain wildfire protection lanes	X
190B019	Maintain facility sanitation	X

PERFORMING PROMOTIONAL ACTIVITIES

		PA
190C001	Conduct a visitors' program and tour	X
190C002	Register visitors	X
190C003	Give information and directions in a variety of formal and informal settings	X
190C004	Implement environmental education programs	X
190C005	Identify recreational needs and interests of special individuals and groups	X
190C006	Lead or guide recreational activities	X
190C007	Stimulate interest and participation in recreational activities for special groups	X

MANAGING FACILITY FLORA AND FAUNA

		PA
190D001	Identify plant communities and dominant species within a selected area	X
190D002	Identify native plant species within a selected area	X
190D003	Apply pesticides	X
190D004	Identify wildlife species within a selected area	X
190D005	Identify endangered or exotic species of plant and animal life in a selected area	X
190D006	Monitor an ecological burn	X

PERFORMING GENERAL OFFICE WORK

		PA
190E001	File materials, such as receipts, letters, documents, specifications and orders	X
190E002	Type reports	X
190E003	Process incoming telephone calls	X
190E004	Process outgoing telephone calls	X
190E005	Clean work areas	X
190E006	Make minor office equipment repairs	X

USING TOOLS, MATERIALS AND EQUIPMENT

		PA
190F001	Transport supplies using motorized wheeled or tracked equipment	X
190F002	Maintain grounds using power tools	X
190F003	Maintain grounds using power equipment	X
190F004	Use hand tools	X
190F005	Patrol lake using motorized and nonmotorized watercraft	X
190F006	Perform preventative maintenance on tools	X
190F007	Perform preventative maintenance on equipment	X
190F008	Pick up supplies using business vehicles	X
190F009	Maintain a tool and equipment inventory	X

ASSEMBLING, SERVICING AND MAINTAINING EQUIPMENT AND FACILITIES

		PA
190G001	Follow a facility and grounds maintenance schedule	X
190G002	Report facility and grounds maintenance needs	X
190G003	Inspect water and sewer systems	X
190G004	Inspect structures and conveniences needing maintenance	X
190G005	Maintain grounds and recreation areas	X
190G006	Construct recreational equipment	X
190G007	Make electrical repairs	X
190G008	Troubleshoot equipment failure	X
190G009	Prepare concrete forms	X
190G010	Finish concrete	X
190G011	Maintain facility roads	X
190G012	Maintain facility culverts	X
190G013	Maintain facility drainage ditches	X
190G014	Perform preventative and scheduled maintenance activities on grounds and facilities	X

APPLYING SAFETY PRACTICES

		PA
190H001	Apply basic emergency first aid	X
190H002	Use fire extinguisher	X
190H003	Administer cardiopulmonary resuscitation (CPR)	X
190H004	Comply with safety requirements for working around automated equipment	X
190H005	Participate in safety training programs	X
190H006	Assist with search and rescue operations	X
190H007	Implement plans to protect visitors from dangerous animals and other hazards	X
190H008	Implement plans to protect animals and plants and other resources from visitors	X
190H009	Store flammable and other hazardous materials safely	X
190H010	Monitor equipment for safe operation	X
190H011	Maintain shields, guards and other safety devices on tools and equipment	X
190H012	Comply with Occupational Safety and Health Administration (OSHA) safety standards	X
190H013	Complete accident or injury reports	X